

# THE CHEMIST AND DRUGGIST

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For Infants from birth to 4 months of age.

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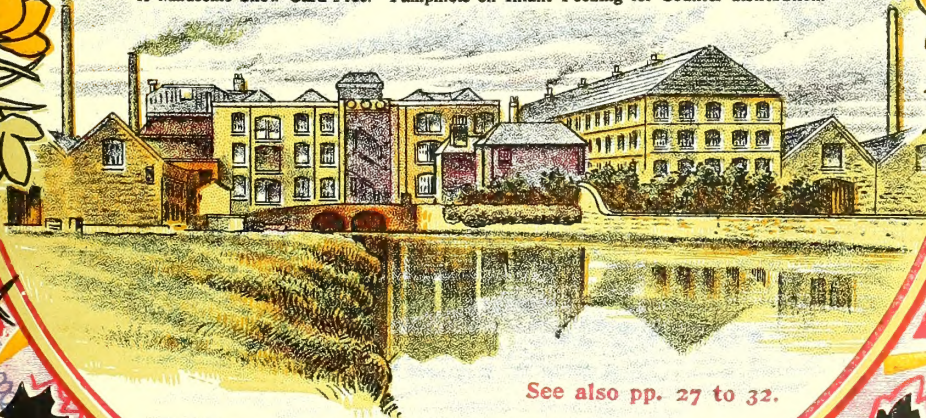
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See also pp. 27 to 32.

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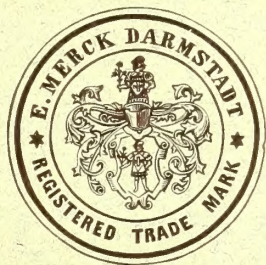
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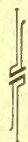


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# Merck's Technical Chemicals.

## For PHOTOGRAPHY and PROCESS WORK.

Acid Pyrogallic, Hydroquinon, Pyrocatechin, Ammon and Potass. persulphates, Potass. and Sodium caustic, Ammon, Potass. and Sodium bromides and iodides, Ammon bichromate, Iron perchloride, Cadmium bromide and iodide, etc.

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Cumarin, Heliotropin, Vanillin, \*  
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butyric, etc.

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Acid phosphoric anhydrous,  
etc.

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Acid lactic, Acid chromic, Hide Powder.

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Barium, Lithium and  
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I am at all times willing to make **Chemicals that are not commercial articles**, and also **new Preparations**, provided my customers agree in advance to pay the price I may have to charge, and also consent to take the whole quantity obtained.

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# MERCK'S Chemicals and Drugs

for the Materia Medica and the Arts.

THE FOLLOWING

## Extract from Merck's List

embraces the more important preparations which are continually asked for in wholesale quantities, and shews all articles stocked in London. (\*)

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<p>ABSINTHIN</p> <p>* ACETANILID <i>P.B.</i> '98 28 lb. pcls.</p> <p>ACETONE</p> <p>ACETYL :—</p> <p>BROMIDE</p> <p>CHLORIDE</p> <p>ACID :—</p> <p>AGARIC (<i>Agaricin P.G. 3</i>)</p> <p>ARSENIC</p> <p>ARSENIOUS</p> <p>BENZOIC from Gum <i>P.B.</i> '98 1 and 7 lb. pcls.</p> <p>" from Toluol 14 lb. pcls.</p> <p>BUTYRIC</p> <p>* CAMPHORIC, extra pure Cryst. 1 lb. bots.</p> <p>CARBOLIC</p> <p>CARMINIC</p> <p>CATHARTIC</p> <p>CETRARIC</p> <p>CHROMIC</p> <p><i>P.B.</i> '98 1 lb. bots.</p> <p>Pure Cryst. about 90 % 1 lb. bots.</p> <p>Com'l dry Cryst. 28 lb. tins and 1 cwt. tins in crates</p> <p>* CHRYSOPHANIC, <i>Med. P.B.</i> '98 1 and 7 lb. tins</p> <p>CITRIC</p> <p>EMBELIC</p> <p>FILICIC</p> <p>FLUORIC</p> <p>FORMIC</p> <p>* GALLIC, pure Cryst. <i>P.B.</i> '98 7 lb. pcls.</p>	<p>ACID (<i>continued</i>) :—</p> <p>GLYCERO-PHOSPHORIC 1 lb. bots.</p> <p>GYNOCARDIC</p> <p>* HIPPURIC, Cryst. 1 lb. bots.</p> <p>HYDROBROMIC</p> <p>HYDROCYANIC</p> <p>HYDROFLUORIC</p> <p>HYDROIODIC</p> <p>HYDRO-SILICO FLUORIC</p> <p>KAKODYLIC</p> <p>* LACTIC <i>Conc. 121, P.B.</i> '98 7 lb. bots.</p> <p>MALIC</p> <p>* MOLYBDIC, pure 7 lb. pcls. extra pure 14 lb. pcls.</p> <p>* MONOCHLORACETIC, pure Cryst. 1 lb. bots.</p> <p>OLEIC</p> <p>* OSMIC <math>\frac{1}{2}</math> and 1 gm. tubes</p> <p>PHOSPHOMOLYBDIC</p> <p>PHOSPHORIC</p> <p>* <i>Meta Glacial Sticks</i> 1 lb. bots. <i>Anhydrous</i></p> <p>PHOSPHOTUNGSTIC</p> <p>* PYROGALLIC, resublimed 1 oz. tins and bots., 1 and 7 lb. tins</p> <p>PYROGALLIC, heavy Crystals, 1 oz. bots., 1 &amp; 7 lb. tins</p> <p>* SALICYLIC, Amorph. 1, 7 and 14 lb. pcls., 1 lb. boxes &amp; bots.</p> <p>" Cryst. <i>P.B.</i> '98 1 &amp; 14 lb. pcls.</p> <p>1 lb. boxes and bots.</p> <p>* " <i>Physio pure</i> 1, 7, &amp; 14 lb. pcls.</p> <p>" <i>Natural</i> 1 lb. bots. and 7 lb. tins</p> <p>SCLEROTIC (<i>Dragendorff</i>)</p>	<p>ACID (<i>continued</i>) :—</p> <p>* TANNIC, very light, clearly soluble, <i>P.B.</i> '98 7 lb. pcls.</p> <p>* TRICHLORACETIC, pure Cryst. 1 lb. bots.</p> <p>VALERIANIC</p> <p>ACONITINE :—</p> <p>AMORPH, Powder CRYST., <i>P.B.</i> '98</p> <p>* ADEPS LANAEE <i>Medicinal</i> 1 Kilo tins</p> <p>AGARICIN</p> <p>ALBUMIN from Eggs</p> <p>" " " Blood</p> <p>ALCOHOL</p> <p>ALDEHYDE</p> <p>ALKANNIN</p> <p>ALLOY, acc. to Wood or Rose</p> <p>ALLYL :—</p> <p>BROMIDE</p> <p>SULPHIDE</p> <p>* ALOIN, <i>P.B.</i> '98 7 lb. tins and 14 lb. pcls.</p> <p>ALUM :—</p> <p>AMMONIACAL, pure dry.</p> <p>CHROM</p> <p>IRON</p> <p>POTASH</p> <p>SODA</p> <p>USTUM (<i>calcined</i>)</p> <p>ALUMINIUM Metal and all Salts</p> <p>ACETO-TARTRATE</p>
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\* All Articles marked with an Asterisk are kept in STOCK IN LONDON.

MERCK'S PREPARATIONS can be obtained through the ordinary trade channels  
or in wholesale quantities from E. MERCK, 16, Jewry Street, LONDON, E.C.



# Extract from Merck's List.

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AMIDOPHENOL, <i>Para</i> <i>extra pure Cryst.</i>	BARIUM :—	* CANTHARIDIN <i>extra pure</i> . Cryst. 1 oz. bots.
* HYDROCHLOR 4 oz. bots.	METAL	CAPSICIN
AMMON :—	CHLORIDE	CARMINE <i>for Histological Researches</i>
BENZOATE <i>from Gum P.B. '98</i>	OXIDE, <i>Anhydrous</i>	CERIUM.—
" " <i>Artificial Acid</i>	" <i>Hydrate</i>	METAL
* BROMIDE, P.B. '98 1 cwt. cases	PEROXIDE, <i>Anhydrous</i>	* OXALATE 7 and 14 lb. pcls.
BICHROMATE <i>techn.</i>	" <i>Hydrate</i>	CETRARIN
" <i>extra pure Cryst.</i> 7 and 28 lb. pcls.	SULPHIDE	CHLORALAMID
EMBELATE	SULPHOCYANIDE	* CHLORALHYDRATE
GLYCEROPHOSPHATE	BEBEERINE	<i>Cryst. and Cake.</i> 28 lb. jars
* IODIDE 1 lb. bots.	* BENZALDEHYDE 7 lb. bots.	* CHLORALOSE 1, 4 and 8 oz. bots.
* MOLYBDATE 7 lb. pcls.	BENZOL	CHLOROFORM
NITRATE	* BENZONAPHTOL 1 & 7 lb. pcls.	<i>pure P.B. and P.J. II.</i>
* PERSULPHATE 1 lb. bots.	BERBERINE	* CHLOROPHYLL, <i>techn.</i> 1 lb. bots. and 14 lb. tins
PHOSPHATE	* BETOL $\frac{1}{2}$ and 1 lb. bots.	CHROMIUM, <i>Metal and Salts</i>
SALICYLATE	BISMUTH :—	* CITRAL 1 lb. bots.
SULPHO-CYANIDE, <i>pure Cryst.</i>	METAL	* COCAINE, <i>pure</i> 1 oz. bots.
VALERIANATE	AMMON CITRATE, <i>scales</i>	* HYDROCHLOR, Cryst. P.B. '98 1 oz. bots & 25 oz. tins
AMYGDALIN	BENZOATE	CODEINE, <i>pure Cryst. and Salts</i>
AMYL :—	* BETANAPHTOLATE 1 lb. bots.	COLCHICIN
ACETATE	* CARBONATE 14 lb. pcls.	CONIINE and Salts
BUTYRATE	* SALICYLATE, 64 % 1 lb. bots. and 7 lb. tins	CONVALLAMARIN
* NITRITE 2 lb. bots.	* SUBNITRATE 28 lb. pcls.	COPPER :—
NITRITE, P.B. '98	* SUBGALLATE 1 lb. bots.	METAL
VALERIANATE	* BROMIPIN 100 and 250 gm. bots.	CHLORIDE ( <i>bi</i> )
ANILINE DYES	* BROMOFORM 1 lb. bots.	" <i>white (mono)</i>
<i>for Microscopic Use</i>	BRUCINE, <i>Cryst. and Salts</i>	OXIDE ( <i>cupric</i> )
ANIMAL REMEDIES	* BUTYLCHLORALHYDRATE 1 and 7 lb. bots.	" ( <i>cuprous</i> )
ANTIDOTE	CADMIUM ;—	SULPHATE
<i>against Cyanide Poisoning</i>	METAL	COTOIN, <i>true</i>
* ANTIFEBRIN, <i>perfectly white</i> <i>Cryst., P.B. '98</i> 28 lb. pcls.	BROMIDE 2 and 7 lb. bots.	* CREOSOTE <i>from Beech Wood Tar</i> 7 lb. bots.
ANTIMONY, <i>Metal and Salts</i>	* IODIDE 1 lb. bots.	" <i>from Coal Tar</i>
* APIOL, <i>Green Fluid</i> 1 lb. bots.	* SULPHIDE, <i>orange</i> <i>light yellow</i>	* CROTONCHLORAL-
* APOMORPHINE, H'CHLOR <i>Cryst., P.B. '98</i> 1 oz. bots.	CAESIUM, <i>Metal and Salts</i>	HYDRATE 1 and 7 lb. bots.
ARAROA ( <i>Goa Powder</i> )	CAFFEINE, <i>pure and Salts</i>	* CUMARIN, <i>white Cryst.</i> 1, 25 and 50 oz. tins
* ARBUTIN, <i>Cryst. white</i> 1 oz. bots.	CALCIUM.—	DATURINE
ARECOLINE	BROMIDE	DECOCTIONS P.B.
* HYDROBROMATE, <i>Cryst.</i> 1 gm. and 1 dr. bots.	GLYCEROPHOSPHATE, <i>Cryst.</i> 1 lb. bots. and 7 lb. tins	* DIASTASE OF MALT 1 lb. bots.
HYDROCHLOR, <i>Cryst.</i>	HYPHOPHOSHITE	DIGITALIN
ARSENIC, <i>Metal and Salts</i>	IODIDE 1 lb. bots.	DIGITOXIN.—
ASBESTOS	LACTATE	* SUBSTANCE 1 & 15 grains tubes
ATROPINE :—	LACTOPHOS. CRYST. SOL. 7 lb. pcls.	* TABLETS of $\frac{1}{10}$ grain bots. of 50 and 100 tablets
PURE, P.B. '98 1 and 8 oz. bots.	OXIDE CAUSTIC, ( <i>Quicklime</i> )	
SULPHATE, P.B. '98 1 oz. bots. and 8 & 25 oz. tins	PERMANGANATE, <i>extra pure</i> 1 lb. bots.	
* SULPHATE, <i>natural</i> 1 and 4 oz. bots. 8, 16 and 25 oz. tins	* TUNGSTATE <i>for X ray screens</i>	
	* CAMPHOR MONOBROM. 7 lb. bots. and tins	
	* CANNABIN TANNATE 1 and 4 oz. bots.	

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# Extract from Merck's List.

\* DI-IODOFORM 1 and 2 oz. bots.  
 \* DIONINE 5 and 10 gm. bots.  
 " Tablets in Tubes of 25.  
 DIPHENYLAMINE  
 DIPHTHERIA ANTITOXIN  
 various strengths  
 DIURETINE  
 DRUGS, all sorts.  
 DUBOISINE  
 \* SULPHATE 1 gm. Tubes.  
 ELATERIN  
 EMETINE  
 EPHEDRINE  
 \* ERGOTIN, *Bonjean*, 1 lb. jars.  
 ESERINE :—  
 HYDROBROM  
 HYDROCHLOR  
 \* PURE 1 gm. bots.  
 \* SALICYLATE " "  
 \* SULPHATE, *Powder*  
 ½ and 1 gm. tubes.  
 1, 2, 5, 10 and 15 grains tubes.  
 ETHER :—  
 ACETIC  
 \* BUTYRIC, *absolute*  
 cases of 4 × 28 lb. tins.  
 CHLORIDE 10 gm. tubes.  
 FORMIC  
 IODIDE  
 EUCALYPTOL, *extra pure*  
*perfectly limpid.*  
 \* *Limpid* 1 lb. bots. and 10 lb. tins.  
 EUONYMIN  
 EXTRACT :—  
 BELLADONNAE, *green P.B. '98*  
 \* BELLADONNAE, *green e Succo*  
*B.P. '85*  
 1 lb. pots and 7 lb. jars  
 \* BELLADONNAE, *Alc. B.P. '98.*  
 7 lb. jars.  
 BELLADONNAE, *Alc., 3—4%*  
*of Alkaloid*  
 BELLADONNAE, *Alc. green*  
*from leaves.*  
 BELLADONNAE, *liquid P.B. '98*  
 \* CANNABIS INDIC, *Alc. soft*  
*green P.B. '98.*  
 1 lb. pots and 7 lb. jars.  
 CANNABIS INDIC, *fluid.*  
 CASCARAE SAGRADA, *Aq. dry*  
*P.B. '98*  
 " *Liquid P.B. '98*  
 CUBEBAE  
 \* ERGOT, *Liquid P.B. '98.*  
 " *P.B. '98.*

## EXTRACT (continued):—

FERRI POMATI  
 \* FILICIS MARIS, *free from Ether.*  
 7 and 14 lb. tins.  
 GLICYRRHIZAE  
 HYDRASTIS, *fluid P.B. '98.*  
 HYOSCYAMI, *green P.B. '98*  
 IPECACUANHA, *fluid, free*  
*from Emetine.*  
 IPECACUANHA, *Liquid P.B. '98*  
 \* NUC. VOMIC, *Alc. P.B. '85*  
 1 lb. pots and 7 lb. jars  
 \* NUC. VOMIC, *Alc. P.B. '98*  
 \* NUC. VOMIC, *Liquid P.B. '98*  
 OPII, *Aq. soft P.B. '98*  
 " *Liquid P.B. '98*  
*and all other EXTRACTS.*  
 FEL BOVINUM  
 \* FORMALDEHYDE, *abt. 40%*  
 7 lb. bots.  
 \* FORMIN, *See Hexamethylenetetramin*  
 \* GALLANOL 1 and 8 oz. bots.  
 GALLOBROMOL  
 GELSEMIN, *Resinoid*  
 GELSEMININE, *Alkaloid*  
 \* HYDROCHLOR, *Cryst.*  
 1 gm. and 1 dr. bots.  
 GLANDULAE *Suprarenales*  
 GLICYRRHIZIN  
*Ammoniated soluble*  
 GOA-POWDER  
 \* GRAPE SUGAR, *Anhydrous*  
 7 lb. tins.  
 GUAIACOL, *Cryst.*  
 " *Liquid Absolute*  
 1 and 7 lb. bots.  
 GUAJAPEROL  
 \* HAEMATOXYLIN, *pure Cryst.*  
 1 oz. bots.  
 \* HAEMOGALLOL  
 " 25 and 50 gm. bots.  
 " *Chocolate Pastilles.*  
 " *Tablets*  
 boxes of 100 tablets  
 HAEMOGLOBIN  
 " *Powder* 1 and 7 lb. tins  
 " *Scales* 1 and 2 lb. tins  
 HAEMOL  
 \* HELENINE 1 oz. bots.  
 \* HELIOTROPIN ½ and 1 lb. bots.

\* HEXAMETHYLEN-  
 TETRAMIN 1 lb. bots.  
 \* HOMATROPINE, *PURE*  
 1 gm. bots.  
 \* HYDROBROM, *Cryst. P.B. '98*  
 1 and 10 gm. bots.  
 \* HYDROCHLOR, *Cryst.*  
 1 gm. bots.  
 HOMO-ARECOLINE  
 HYDRASTINE :—  
 \* *PURE, Cryst.* 1 oz. bots.  
 \* HYDROCHLOR 1 oz. bots.  
 \* SULPHATE 1 oz. bots.  
 HYDRASTININE :—  
 \* *PURE, Cryst.* 1 gm. bots.  
 \* HYDROCHLOR, *Cryst.*  
 1 gm. bots.  
 HYDRAZINE SULPHATE  
 \* HYDROQUINONE  
 1 oz. bots.; 1 lb. boxes;  
 7 and 14 lb. parcels.  
 HYDROXYLAMINE :—  
 HYDROCHLOR  
 SULPHATE  
 HYOSCYAMINE, *TRUE, from*  
*Hyoscyamus Niger*  
 HYDROBROM, *pure Amorph.*  
 \* *PURE Amorph Extractive*  
 1 gm. and 1 dr. bots.  
 \* *PURE Cryst.* 1 gm. bots.  
 \* SULPHATE, *pure Amorph*  
 HYOSCINE, *true*  
 \* HYDROBROM, *Cryst.*  
 1 gm. bots.  
 \* HYDROCHLOR *Cryst.*  
 1 gm. bots.  
 HYPNON  
 \* ICHTHYOL AMMON 1 lb. tins.  
 INDICATORS & DYES  
*for analytical and micro-*  
*scopical purposes.*  
 INFUSIONS, *P.B.*  
 \* IODIPIN 100 and 250 gm. bots.  
 IODINE, *resublimed P.B. '98*  
 \* IODOFORM, *P.B. '98*  
 7 lb. bottles; 14 and 28 lb. jars  
 \* IPECACUANHA, *free from Emetine*  
 1 lb. bots.  
 IRON :—  
 METAL *reduced by Hydrogen*  
 \* CITRATE & AMMON, *green*  
*Scales.* 14 lb. tins.  
 \* GLYCERO-PHOSPHATE  
*Scales.* 1 lb. bots.

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# Extract from Merck's List.

## IRON (continued):—

- IODIDE
- \* LACTATE, *Cryst.* 7 lb. pcls.
- OXIDE, *dialyzed*
- PEPTONATE
- " *Liquid*
- PERCHLORIDE, *Cryst.*
- \* PYROPHOS. C. AMMON
- CITRATE *Scales* 14 lb. tins.
- \* JALAPIN, *white Powder* 1 lb. bots.
- \* KERATIN, PREPARED WITH
- PEPSIN, *for coating Pills* 4 oz. bots.

## KRESOLAL LACTUCARIUM

- \* LARGIN 10 and 25 gm. bots.

## LEAD;—

- METAL,
- IODIDE, *P.B. '98*
- NITRATE, *Cryst.*

## LIQUOR:—

- FERRI DIALYSED.
- " MANGANESE
- PEPTONATE
- " PEPTONATE, *dialysed*

## LITHIUM:—

- METAL
- \* BENZOATE 1 lb. bots. & 7 lb. tins.
- \* BROMIDE 1 lb. bots.
- \* CARBONATE 7 lb. pcls.
- CHLORIDE
- \* CITRATE, *Cryst.* 7 lb. pcls.
- \* " *Powder* 7 lb. pcls.
- GLYCERO-PHOSPHATE
- IODIDE 1 lb. bots.
- \* SALICYLATE 1 lb. bots.

## LINIMENTS, *P.B.*

- \* LITMUS, *gran.* 14 lb. pcls.

## LYCOPODIUM

## LYSOL

## MAGNESIUM

- \* METAL, *Ribbon* 1 oz. coils.
- " *Sticks*
- " *Powder*
- " *Wire*

## GLYCEROPHOS., 50 %

- \* " *Cryst.* 1 lb. bots.

## IODIDE

## OXIDE

## MANGANESE;—

- METAL
- \* GLYCEROPHOSPHATE 1 lb. bots.

## LINOLEATE

## PEROXIDE, *Artificial*

## MARKING INK

## MEDULLA OSSIIUM RUBR.

*Sicc. (Red Bone Marrow)*

## MEDULLA OSSIIUM RUBR.

*Sicc. Tablets of 0.01 gm.*

## MENTHOL, *Recryst.*

## MERCURY;—

- METAL
- BICHLORIDE
- SUBCHLORIDE
- PERNITRATE
- PROTO-NITRATE
- TANNATE 2 lb. bots.

## METHYL SALICYLATE

- \* METHYLENE, BLUE
- medicinal, extra pure.*
- 1 lb. bots.

## BICHLORIDE, *extra pure*

## IODIDE

## MICROCIDIN

## MICROCOSMIC SALT

- MINERALS, *all kinds including*
- rare earths.*

- \* MORPHIA, *pure and Salts*

## MORRHUOL

- \* MYDRINE 1 gm. bots.

## NAPHTALIN;—

- white, Cryst. resublimed*
- pure for internal use*
- Cryst.* 7 lb. pcls.

## NAPHTOL BETA;—

- \* BENZOATE 1 and 7 lb. tins.
- \* MED. CRYST 7 lb. pcls.
- \* RECRYST, *P.B. '98* 7 lb. pcls.
- \* RESUBLIMED 7 lb. pcls.

- \* NEURODINE, *Cryst.* 25 gm. boxes.

## NICKEL;—

- METAL
- SULPHATE
- SULPHATE AMMON

## OLEUM CADINI

- \* FILICIS MARIS 7 and 14 lb. tins.
- \* PINI SYLVESTRIS 7 and 14 lb. tins.
- \* PINI PUMILION 7 lb. tins.
- VINI (*Heavy Oil of Wine*)

## OREXIN HYDROCHLOR

## PANCREATINE;—

- \* PURE *active* 1 lb. bots.
- PURE *absolute*

## \* PARACETPHENETIDINE

7 lb. pcls.

## \* PARAMIDOPHENOL

H'CHLOR 4 oz. bots.

## \* PARALDEHYDE

cases of 4 × 7 lb. bots.

## PELLETIERINE;—

PURE

SULPHATE

TANNATE

## PEPSINE;—

- PURE *P.B. '98*
- ABSOLUTE SCALES
- GRAN, *soluble*
- POWDER, *soluble*
- SCALES
- HYDROCHLOR

*extrative*

## \* PEPTONE FROM MEAT, *dry*

1 lb. bots. and 14 lb. tins.

" FROM MEAT, *soft*

## \* PERONINE 1, 5 and 10 gm. bots,

Tablets of 0.02 gm.

## \* PHENACETIN, *Cryst. and Powder*

7 lb. pcls.

## \* PHENOLPHTHALEINE 1 lb. bots.

## PHENYLENDIAMIN, META

HYDROCHLOR

SULPHATE

## PHENYLENDIAMIN, PARA

HYDROCHLOR

PURE CRYST.

## \* PHENYLHYDRAZIN

H'CHLOR 1 and 2 lb. bots.

## \* PHLORIDZIN 2 oz. bots.

## \* PHLOROGLUCIN 1 oz. bots.

## PHOSPHORUS;—

AMORPH

BROMIDE

CHLORIDE

IODIDE

## \* PICROTOXIN 1 oz. bots.

## PILLS of all descriptions

## PILOCARPIN;—

PURE *Syrupy*

HYDROCHLOR, *Cryst.*

$\frac{1}{2}$  and 1 oz. bots.

## \* NITRATE, *Cryst. P.B. '98*

$\frac{1}{2}$  and 1 oz. bots.

## PIPERIDINE, *Cryst.*

GUAIACOLATE

TARTRATE

\* All Articles marked with an Asterisk are kept in STOCK IN LONDON.

MERCK'S PREPARATIONS can be obtained through the ordinary trade channels  
or in wholesale quantities from E. MERCK, 16, Jewry Street, LONDON, E.C.



# Extract from Merck's List.

## \* PIPERIN, PURE Cryst.

1 oz. bots.

## PLATINUM:—

METAL  
BICHLORIDE, dry  
CYANIDE  
BARIUM CYANIDE

## \* PODOPHYLLIN, P.B. 7 lb. pcls.

## POTASSIUM:—

METAL in balls  
BINOXALATE

## \* BROMIDE, Cryst., P.B. '98

cases of 4 x 28 lb. pcls.

## \* CAUSTIC Sticks

cases of 56 x 1 lb. bots.

CYANIDE  
FERRI-CYANIDE  
FERRO-CYANIDE  
GLYCEROPHOSPHATE, 50 %  
GLYCEROPHOSPHATE, 75 %  
GLYCEROPHOSPHATE, 100 %  
HYPOPHOSPHITE

## \* IODIDE P.B. '98

14 and 28 lb. pcls.

META BISULPHITE  
NITRATE, P.B. '98  
" extra large Cryst.  
OXALATE, neutral  
PERMANGANATE  
PERSULPHATE (Anthion)  
SULPHATE  
TARTRATE

## PYOKTANIN, blue and yellow

## \* PYRIDINE 1 lb. bot.

## \* PYROCATECHIN, Resublimed

" Cryst. 1, 4 and 8 oz. bots.

## QUASSINE

## QUININE, PURE and Salts

## \* RESIN JALAP, white Powder

1 lb. bots.

## RESIN SCAMMONIA

## RESINATES:—

CERIUM LINOLEATE, fused  
CERIUM RESINATE  
" techn. fused  
" techn. precip.  
LEAD LINOLEATE, fused  
LEAD MANGANESE  
" resinate fused  
LEAD MANGANESE  
" LINOLEATE, fused  
LEAD RESINATE, fused  
" " precip.

## RESINATES (continued):—

MANGANESE BORATE  
TECHN. (SICCATIVE)  
MANGANESE LINOLEATE  
" fused  
MANGANESE RESINATE  
" fused  
" " precip.

## \* RESORCIN, extra pure Recryst.

1 and 7 lb. tins

## RUBIDIUM:—

METAL  
BROMIDE & AMMON

8 oz. bots.

## IODIDE, Cryst.

## \* SALICIN, P.B. '98

14 lb. pcls.

## \* SALOL P.B. '98

1 lb. pcls.

## \* SANTONIN, Cryst., P.B. '98

7 lb. pcls.

## \* SAPONIN, pure, very white

1 lb. bots. and 7 lb. tins

## SCHLIPPE'S SALT

## \* SCOPOLAMINE HYDRO-

BROMATE 1 gm. bots.

## SERUM:—

ANTIDIPHThERIC.  
ANTISTREPTOCOCCUS  
ANTITUBERCULAR  
ANTIVENOMOUS

## SILICA:—

PURE, natural Powder  
" by wet Process

## SILICIUM, Metal and Salts

## SILVER, Metal and Salts

## SODIUM:—

METAL  
BENZOATE from Gum  
" Artificial  
BROMIDE, P.B. '98  
CAUSTIC, Sticks  
cases of 56 x 1 lb. bots.

CHLORIDE, extra pure Cryst.  
P.B. '98

GLYCEROPHOSPHATE 50 %

## \* GLYCEROPHOSPHATE 75 %

1 and 7 lb. bots.

GLYCEROPHOSPHATE 100 %

HYPOPHOSPHITE

IODIDE P.B. '98

LACTATE

NITRATE

NITRATE, extra pure Sticks

PHOSPHATE, P.B. '98

free from Arsenic

## SODIUM (continued):—

\* SALICYLATE, Cryst. & Powder  
1 lb. bots. and 14 lb. pcls.  
" physio. pure  
1 lb. bots.  
" 7 and 14 lb. pcls.  
" natural  
1 lb. bots. and 7 lb. tins

## SANTONATE

## SANTONINATE

SULPHO-CARBOLATE P.B. '98  
7 lb. pcls.

TARTRATE & POTASH  
(Rochelle Salt)

## SOZOIODOL

## SPARTEINE:—

PURE (syrupy)  
SULPHATE, Cryst.  
1, 4 and 8 oz. bots.

## TRI-IODIDE

## STRONTIUM:—

METAL  
BROMIDE, Anhyd. 7 lb. bots.  
" Cryst. 7 lb. bots.

## CARBONATE

## IODIDE

## LACTATE

## NITRATE

## SALICYLATE

## SULPHATE

## \* STROPHANTHIN 1 gm. bots.

## STRYCHNINE

## \* PURE Cryst. 25 oz. tins

## \* " Precip.

## \* HYDROCHLOR

## \* NITRATE

## \* SULPHATE, Neutral

## \* STYPTICIN

1 gm., 10 gm. and 1 oz. bots.

## \* Sugar coated tablets of 0.05 gm. tubes of 20 tablets

## \* SULPHONAL, Cryst. or Powder

7 lb. pcls.

## SULPHUR:—

## CHLORIDE

## IODIDE

## TANNOFORM:—

## \* SUBSTANCE 25 gm. packets.

## \* DUSTING POWDER

50 gm. paper dredgers

## \* OINTMENT & SOAP

cartons of 10 tubes of 25 gm.

## SOAP in cakes

## TEREBENE, optically inactive

" P.B. '98

\* All Articles marked with an Asterisk are kept in STOCK IN LONDON.

**MERCK'S PREPARATIONS** can be obtained through the ordinary trade channels or in wholesale quantities from **E. MERCK, 16, Jewry Street, LONDON, E.C.**

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# Extract from Merck's List.

* TERPIN HYDRATE 1 lb. pcls.	TOLUOL	* VANILLINE 1 and 25 oz. tins
* TERPINEOL 1 lb. bots.; 5 and 10 lb. tins	* TOOTH CEMENT cartons contg. 1 bottle cement and 1 bottle acid	VASELINE
TERPINEOL MUGUET	TRAUMATICIN	VERATRINE and all Salts
* TERPINOL 1 lb. bots.	TROPACOCAINE HYDRO- CHLOR	* ALKALOID, extra pure 1 and 2 oz. bots.; 4, 8 and 16 oz. tins
THALLIN	TROPEOLIN	WAX, all sorts
* SULPHATE 1 oz. tins	URANIUM :—	XYLOL, PURE
TARTRATE	METAL	ZINC :
PERIODIDE 1 oz. bots.	ACETATE, extra pure Cryst. 1 lb. bots.	METAL, absolutely free from Arsenic
THALLIUM METAL and Salts	* NITRATE, extra pure Cryst. 1 lb. bots.	" highly pure, redistilled
THEOBROMINE :—	* NITRATE, Cryst. 1 lb. bots.	" chemically pure
LITHIA BENZOATE 1 oz. packets	OXIDE, yellow " black " red	" Powder (Zinc Dust)
LITHIA SALICYLATE 1 oz. packets	* UREA, extra pure Cryst. 2 lb. bots.	CHLORIDE, pure, white sticks
* PURE 4 and 8 oz. bots.	" NITRATE	CYANIDE & MERCURY
* SODIO-SALICYLATE 1 and 8 oz. bots.	URETHAN :—	LACTATE
* THERMODINE, Cryst. 25 gm. boxes	* ETHYL 1 and 7 lb. pcls.	OXIDE
* THYMOL, Cryst. 14 lb. pcls.	PHENYL	PERMANGANATE, Cryst. 1 lb. bots.
THYROIDIN	UROPHERINE :—	SALICYLATE
TINCTURES, P.B. '98	* BENZOATE 1 oz. pkts.	SULPHO-CARBOLATE P.B. '98 7 lb. pcls.
TIN :—	* SALICYLATE 1 oz. pkts.	VALERIANATE, Cryst. P.B. '98 4 lb. tins
METAL		VALERIANATE, Powder P.B. '98
CHLORIDE (Bi), Cryst., white		ZIRCONIUM, Metal and all Salts
CHLORIDE, (Proto.) pure Cryst.		

\* All Articles marked with an Asterisk are kept in STOCK IN LONDON.

Any Chemicals and Drugs not mentioned in this List will be supplied at shortest notice and at lowest possible Prices.

**Inflammable** or **otherwise dangerous goods** must come to Rotterdam by Acid train. Consignments by this conveyance usually leave the Works during the first and third week of each month, arriving in London about three weeks after dispatch. Orders should be given accordingly.

I am at all times willing to make **Chemicals that are not commercial articles**, and also **new Preparations**, provided my customers agree in advance to pay the price I may have to charge, and also consent to take the whole of the quantity obtained.

**Information** as to the nature, dose, method of application, or any other particulars will be gladly furnished by the **Scientific Department of Merck's Chemical Laboratories at Darmstadt.**

**MERCK'S PREPARATIONS** can be obtained through the ordinary trade channels or in wholesale quantities from E. MERCK, 16, Jewry Street, LONDON, E.C.

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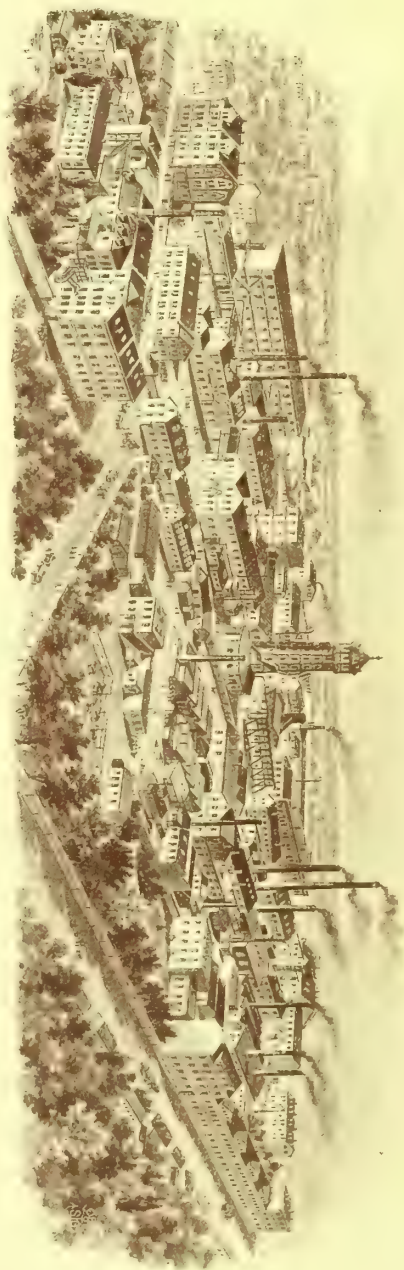
## *Awards to the Merck Products.*

1830:	<b>Gold Medal:</b> "For the Relief of Mankind."	Pharmaceutical Society of PARIS.
1853:	<b>Medal and Special Approbation:</b> "For Specimen of Alkaloids."	Exhibition of the Industry of all Nations, N.Y.
1861:	<b>Gold Medal and Diploma.</b>	Industrial Exposition, DARMSTADT.
1862:	<b>Medal: "Honoris Causa."</b>	World's Fair, LONDON.
1864:	<b>Award: "Beyond Competition."</b> "Numerous and varied collection of Alkaloids and very rare products; Physiological Prepara- tions of high interest and very difficult to obtain in any appreciable quantity."	Pharmaceutical Congress of France, STRASSBOURG.
1867:	<b>Gold Medal.</b> "Chemical Preparations; Quinine Salts; Alkaloids."	Universal Exposition, PARIS.
1873:	<b>Medal of Progress and Diploma.</b> (The Highest Award.)	World's Exposition, VIENNA.
1876:	<b>The Great Prize Medal and Diploma.</b>	Industrial Exposition, DARMSTADT.
1879:	<b>Highest Award.</b>	International Exhibition, SYDNEY.
1880:	<b>Gold Medal and Diploma:</b> "A Fine and Vast Collection of the Rarest Alkaloids and their Salts."	Medical Association of Italy, GENOA.
1880:	<b>Gold Medal:</b> "Vitam Excolere per Artes."	International Exhibition, MELBOURNE.
1883:	<b>The Diploma of Honour:</b>	International Exposition, AMSTERDAM.
1893:	<b>Highest Award; Medal and Diploma:</b> "For a large variety of preparations of great purity;" and "For great service rendered to the medical and pharmaceutical professions."	Columbian Exposition, CHICAGO. ( <i>"On Medicinal Chemicals."</i> )
1893:	<b>Highest Award; Medal and Diploma:</b> "For excellence of chemicals for analytical and scientific uses."	Columbian Exposition, CHICAGO. ( <i>"On Guaranteed Reagents."</i> )

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# MERCK'S CHEMICAL WORKS,



DARMSTADT,  
(GERMANY).





LARGEST  
PILL FACTORY  
IN THE  
WORLD.

FOUNDED 1856.

AN ABRIDGED . . . . .  
PRICE-LIST OF . . . . .

**W. R. WARNER & CO.'S**

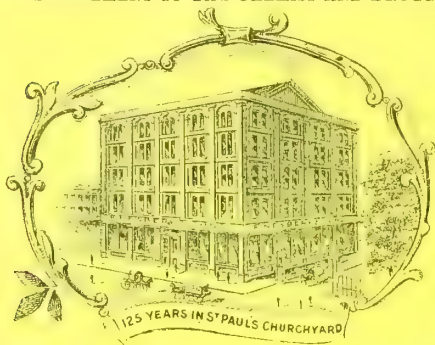
SOLUBLE SUGAR AND  
GELATINE COATED . . .  
PILLS, GRANULES, TAB-  
LETS, EFFERVESCENT..  
SALTS, HYPODERMICS,  
AND ELEGANT . . . . .  
PHARMACEUTICALS. . .



FRANCIS  
NEWBERY  
& SONS,

British Depot,  
Estab. A.D. 1746,  
Charterhouse Square,  
London, E.C.





27 AND 28, CHARTERHOUSE SQUARE,  
AND 44, CHARTERHOUSE STREET,  
LONDON, E.C.

## To the Members of the Drug Trade at Home and Abroad.

### Accuracy and Finish.

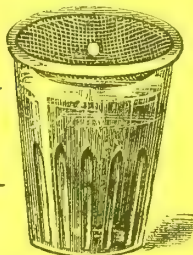
It is our agreeable privilege to again tender cordial thanks for the continued appreciation with which the manufactures of W. R. WARNER & Co. are universally received. The excellence of finish and accuracy of dosage, ensured by the most modern and perfect appliances, have placed the goods "at the head," and it is deservedly true to say of them that "they have come to stay." As in the past, no pains have been spared in the effort to arrive at perfection, so, in the future, vigilant care will be exercised to maintain that unapproached position of which a world-wide *clientèle* furnishes the most conclusive evidence.

### Awards for Excellence.

This happy result of an experience of upwards of forty years is also evidenced by numerous first-class awards at various international exhibitions. Sixteen highest Prize Medals awarded since 1873, testify to the opinion of those best qualified to adjudicate upon the firm's exhibits. As the natural result, these preparations are prescribed by the medical profession, not only in the United Kingdom, but also in the Colonies and in most Continental cities and health resorts. Hence it is that they are "known to nations in every zone."

See it  
Dissolve. }

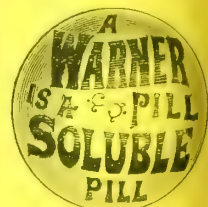
See it  
Dissolve. }



(What dissolves in plain  
Water must dissolve in  
the warm, non-stagnant  
fluids of the body.)

### " . . . Sugar-coated pills are more soluble than gelatine-coated or compressed pills."—Prof. Remington's

*Paper, read before the American Pharmaceutical Association, Boston, 1875; because: No sub-coating of insoluble shellac is necessary, and the direct application of heat is entirely avoided. The preservative properties of sugar, and the tendency to attract rather than yield moisture, as gelatine does, prevent the subsequent drying and hardening of the pill mass.*



Although, as a pill coating, sugar commends itself as the only proper substance, a demand has been created for pills covered with a thin film of gelatine, which has the

advantage of transparency. To meet this demand a selection of such pills is added. By the adoption of original and improved scientific methods of manipulation, they are supplied **without pin-holes** and with a perfectly smooth and uniform coating.

### "Packed" Goods.

To meet the requirements of chemists desiring to receive goods ready for immediate sale, we are supplying quantities of a gross and upwards of any formula, with wrappers bearing the seller's name and address. Full particulars of this line of goods will be furnished on request. Popular formulæ are from time to time added to meet the requirements of the trade and the public.

### Private Formulæ.

Careful attention is given to the preparation of special recipes, for which orders are solicited. We are prepared to supply millions of pills, but it is impracticable to properly manipulate a smaller number than 3,000.

Purchasers may rest assured that, so far as may be possible (*consistently with the maintenance of the uniform high standard of quality*), low quotations, especially for large supplies, will be cheerfully accorded.

Articles in the List can be readily sent by post, and obtained either from any wholesale house, or direct from

Yours faithfully,

FRANCIS NEWBERY & SONS.  
(ESTAB. A.D. 1746.)

July 20, 1900.

\*The following comments by the Jury of Awards of the Columbian Exhibition of 1893 may here be quoted, viz.:—"The coating is perfect, and protects the pills indefinitely, samples twenty-seven years old being shown, readily soluble in hot water, and made of the best materials obtainable" and "The Two Grain Quinine Pills, under chemical analysis, gave 2 grains and  $\frac{1}{1000}$ , which is an exemplification of absolute accuracy, allowing a little for loss of water on crystallization."





(Fac-simile of package, actual size.)

**LITHIA LENTIFORMS**, in Tubes of 5 grain size, 6/- per dozen; also in square screw-capped Bottles, 8/3 per dozen. Special low figures for six-dozen lots and upwards.

# WARNER'S Lithia Water Tablets.

THE value of Lithia as a remedy for Rheumatism, Gout, Kidney Diseases, etc., etc., is becoming more apparent every day. The present year will see more Lithia Tablets sold than at any previous time. A remedy commanding such attention and with such a favourable outlook deserves much consideration at the hands of the druggist. **FIRST HE MUST SECURE FOR HIS TRADE** a Tablet that possesses

**ACCURACY,  
THERAPEUTIC VALUE,  
RAPID SOLUBILITY,  
PALATABILITY.**

Because these points of merit will make the customer specify his preference.

Second.—He must secure a Tablet that will not "crumble" and "run," but one that will continue in as good condition as when made.

Third.—A tablet that is widely advertised is preferable because it is productive of rapid sales.

Warner's Lithia Tablets offer these advantages, and that is why we say:—

**"WE SELL THEM TO YOU  
AND THEN HELP YOU  
TO SELL THEM."**

Warner's Lithia Tablets furnish the patient with a sparkling effervescent draught; the physician with means for prescribing just the quantity of Lithia required; the druggist with a profitable article to dispense.

**THEY ARE PERMANENT.**

No loss from deterioration. At 8/3 per dozen, if sold for 1/- each, the profit is nearly 4d. per bottle, or 50% on the investment. It surely pays to push so profitable an article. If called to the attention of your customers who are using *lithia water*, they will undoubtedly prefer Warner's Lithia Water Tablets to all others, because of their

**Convenience.**

**Economy.**

**EASY TO HANDLE.**

**EASY TO SELL.**

**Accuracy.**

**Palatability.**

If preferred, we put them up in lots of six dozen and upwards, bearing name and address of buyer.

**WARNER'S ORIGINAL LITHIA WATER TABLETS ARE QUICK SELLERS.**

F. NEWBERRY & SONS (Estd. over 150 Years), 27 & 28, CHARTERHOUSE SQUARE, LONDON, E.C.



# QUICKLY SOLUBLE HYPODERMIC TABLETS.

## WM. R. WARNER & CO.

In compliance with repeated requests from the medical profession to manufacture quickly soluble Tablets for subcutaneous medication, we respectfully call attention to the following list.

We desire to emphasize the statement, that, in undertaking the manufacture of these delicate agents, we have devoted much time and labour in bringing them to a state of perfection; in this we have been assisted by the co-operation of our medical friends.

We claim (and a candid comparison will convince anyone) for our soluble Tablets the following points of superiority, viz.:-

1. They are quickly and entirely soluble, and rapid in action.
2. They are permanent in form and accurate in dose.

NOTE.—Our Tablets are put up in tubes containing twenty, and packed in boxes of five tubes. When ordering, please specify WM. R. WARNER & Co.'s HYPODERMIC TABLETS.

SOLUBLE HYPODERMIC TABLETS.				Per doz. Tubes of 20 Tablets.	SOLUBLE HYPODERMIC TABLETS.				Per doz. Tubes of 20 Tablets.			
ANÆSTHETIC, Local, No. 2,					MORPHINE AND ATROPINE No. 4.							
Cocaine Hydrochlor.	1-10 gr.	} ...	} ...	9/-	Morphine Sulph.	1-4 gr.	} ...	} ...	6/3			
Morphine	1-40 gr.				Atropine Sulph.	1-100 gr.						
Sodium Chloride	1-5 gr.				MORPHINE AND ATROPINE No. 5.							
ANÆSTHETIC, Local, No. 4,					Morphine Sulph.	1-8 gr.	} ...	} ...	5/6			
Morphine	1 gr.	Atropine Sulph.	1-150 gr.	MORPHINE AND ATROPINE No. 6,								
Sodium Chloride	1 gr.	Morphine Sulph.	1-8 gr.	} ...	} ...	5/6						
ANÆSTHETIC, Local, No. 6,							Atropine Sulph.	1-100 gr.				
Cocaine Hydrochlor.	1-20 gr.	Morphine Sulph.	1-8 gr.				MORPHINE AND ATROPINE No. 8,					
Morphine	1 gr.	} ...	} ...	9/-	Morphine Sulph.	1-6 gr.	} ...	} ...	6/3			
Sodium Chloride	1 gr.				Atropine Sulph.	1-120 gr.						
APOMORPHINE MURIATE...					1-8 gr.	9/6				MORPHINE AND ATROPINE No. 11,		
ATROPINE SULPHATE ...				1-60 gr.	4/3	Morphine Sulph.	1-4 gr.	} ...	6/6			
ATROPINE SULPHATE ...				1-100 gr.	4/3	Atropine Sulph.	1-60 gr.					
CAFFEIN SODIO-BENZOATE ...				1 gr.	8/6	MORPHINE AND ATROPINE No. 13,						
COCAINE HYDROCHLORATE ...				1-2 gr.	13/-	Morphine Sulph.	1-2 gr.	} ...	8/6			
CODEINE SULPHATE ...				1-4 gr.	8/6	Atropine Sulph.	1-150 gr.					
CONIINE HYDROBROMATE ...				1-100 gr.	4/3	MORPHINE AND ATROPINE No. 14,						
DIGITALINE. Pure ...				1-60 gr.	5/3	Morphine Sulph.	1-2 gr.	} ...	8/-			
DUBOISINE SULPHATE ...				1-60 gr.	6/-	Atropine Sulph.	1-20 gr.					
ERGOTIN ...				1-10 gr.	4/6	NITROGLYCERIN ...						
ESERINE SULPHATE ...				1-100 gr.	6/6	... ..	1-50 gr.	4/3				
HYOSCYAMINE SULPHATE ...				1-100 gr.	5/3	NITROGLYCERIN ...	... ..	1-150 gr.	4/3			
MORPHINE BIMECONATE ...				1-4 gr.	6/6	NITROGLYCERIN ...	... ..	1-100 gr.	4/3			
MORPHINE BIMECONATE ...				1-8 gr.	4/3	PHYSOSTIGMINE SULPH.	... ..	1-60 gr.	9/-			
MORPHINE MURIATE ...				1-8 gr.	5/-	(See Eserine Sulph.)						
MORPHINE MURIATE ...				1-4 gr.	5/6	PILOCARPINE MURIATE ...	... ..	1-8 gr.	12/6			
MORPHINE SULPHATE ...				1-8 gr.	4/6	STRYCHNINE NITRATE ...	... ..	1-150 gr.	4/6			
MORPHINE SULPHATE ...				1-4 gr.	5/6	STRYCHNINE SULPHATE ...	... ..	1-100 gr.	4/6			
MORPHINE SULPHATE ...				1-2 gr.	7/6	STRYCHNINE SULPHATE ...	... ..	1-60 gr.	4/6			
MORPHINE AND ATROPINE No. 2,						STRYCHNINE SULPHATE ...	... ..	1-30 gr.	5/-			
Morphine Sulph.	1-6 gr.	} ...	} ...	5/9	STRYCHNINE AND ATROPINE No. 2.							
Atropine Sulph.	1-180 gr.				Strychnine Sulph.	1-30 gr.	} ...	} ...	6/6			
MORPHINE AND ATROPINE No. 3.				Atropine Sulph.	1-120 gr.							
Morphine Sulph.	1-4 gr.	} ...	} ...	6/3								
Atropine Sulph.	1-150 gr.											

Agents for Great Britain: F. NEWBERY & SONS, 27 & 28, Charterhouse Sq., London, E.C.

### SUMBUL PREPARATIONS.

(Medical Press and Circular, 4th May, 1898.)

Sumbul is a drug which has of late years fallen somewhat into disuse, in spite of the fact that it possesses remarkable anti-spasmodic and stimulating properties, rendering it of value in the treatment of depressed and ex. citable conditions of the nervous system. Messrs. Warner & Co. have adopted Dr. Goodell's formula for the preparation of a pill containing extract of sumbul, dried sulphate of iron, asafetida, and arsenious acid. This is unquestionably an excellent combination in which to obtain the tonic effects of iron and arsenic in association with the recognize action of sumbul on the nervous system. These sugar-coated pills are characterized by extreme finish, they are absolutely uniform in size, and their consistency and solubility leave nothing to be desired. The list of pill formularies by this firm is long, and there are really but few therapeutical combinations of recognised merit which are not comprised therein.

In their "Tono-Sumbul Cordial" we have an elegant pharmaceutical preparation in which are associated sumbul, ammoniated citrate of iron, cinchona, acid phosphates, and aromatics, these being dissolved in sherry. The action of sumbul, as we have already pointed out, is similar to, but more agreeable as well as more powerful than, musk, valerian, etc., and in this "cordial" its effects are reinforced by the other tonic and reconstituent drugs in a form which cannot fail to commend itself to fastidious patients.

### A NEW HYPODERMIC SYRINGE

Invented by Dr. C. W. DENNIS.

**Aseptic, Unbreakable, Accurate.**

Always ready for use.

No leather or rubber washer on piston.

No glass to break at a critical moment.

Piston one solid piece of metal.

Graduations marked, in minims and cubic centimetres, on piston.

The entire instrument can be boiled to produce sterilization; this in itself is a most important feature of the new instrument, possessed by none of the old-fashioned syringes. Each Syringe is packed in a handsome aluminium case, with outside cover, containing in addition two needles and four tablet tubes.

Syringe complete, 11/3 ea., net. Extra Needles, 8d. ea.

Dr. Dennis's "No. 2" Hypodermic Syringe, each 10/6.



( 5 )



LENTIFORMS, *i.e.*, Tabulo-spheroidal Disk-lets—



Cascara Sagrada, 2 grs., 25 in bot....	s. d.	£ s. d.
Ditto, 2 doz. for 6/6	0 6	0 3 4
Ditto, in hinged tins, for the pocket, as illus.	0 6	0 2 9



Ditto, 100 in bot. ....	0 10 6
Ditto, 500 „ ....	2 8 0
Ditto, per 1,000, 6/6	
Charcoal, oval screw flasks ...	0 3 5
Compressed Bi-carb. Potash, 1 lb. bots. ...	0 18 0
Ditto, ½ lb. bots. 1/-	
Ditto, oval screw flasks ..	0 3 3
Ditto, Bi-carb. Soda, 1 lb. bots. 1/6	
Ditto, ½ lb. bots. 1/-	
Compressed Chlorate of Potash (5 grs. chemically pure Chlorate without extraneous matter), ½ lb. tins 10d.	
Ditto, 1 lb. tins 1/3	
Ditto, in elegant oval bottles ...	0 2 9
(In angular Counter Case, displaying 12 Oval Flasks of Lentiforms at a view.)	
Ditto, in Metal Boxes, gold colour, and elegantly labelled ...	0 1 4
Ditto, labelled either in French or English, per gross 14/6	
Compressed Chlorate of Potash and Borax, ½ lb. bots. 1/2; Ditto, 1 lb. bots. 1/8	
Ditto, in metal boxes, gold colour, and elegantly labelled ...	0 1 6
Ditto, per gross 16/6	
Compressed Muriate of Ammonia, 1 lb. bots. 2/6; Ditto, in oval flasks ...	0 3 3
Compressed Paregoric (10 grs.), per vase (14 oz.) 5/-	
Compressed Pepsin, in oval screw-capped vials ...	0 4 0

Compressed Soda and s. d.  
Ginger, 1 lb. tins ...  
Ditto, per elegant vase 3/9  
Ditto, per 5 lb. tin 6/8  
Square Labels for ditto, for use on screw-capped vials, etc., per 100 4d.

Per Doz.  
£ s. d.  
0 16 0



Compressed Soda Mint (Bi-carb. Soda, Carb. Ammon., and Soda Mint), each represents one tablespoonful of liquid  
Soda Mint, 1 lb. bots. 1/6  
Ditto, in elegant oval bottles ... 0 6 0 2 9



Effervescent, viz.:—Carlsbad Salt ...	1 0 0 8 3
Ditto, 1 doz. (assorted with Vichy if desired, for 8/-)	
Kissingen Salt ...	1 0 0 8 3
Kissingen and Vichy Lentiforms in Combination, <i>i.e.</i> , a bottle of each in case, as recommended by Dr. W. F. Cathell, in the treatment of Obesity	2 0 0 17 0
Lithia (5 grs.) ...	1 0 0 8 3
Ditto (5 grs.) ...	1 6 0 11 6
Vichy Salt ...	1 0 0 8 3



# PACKED, NON-PROPRIETARY PILLS

*For Counter Sale. (Sugar-Coated.)*

## A "PROFIT MAKING" HINT.

THE most profitable remedies a druggist sells are those put up under his own name and address. The more he sells, the more he *will* sell in the future. That is if he buys standard preparations and thus furnishes his customer with remedies that are effective. That's what we desire to talk about. "Warner Made" Pharmaceuticals are superior. Have been for many years. We were pioneers in the manufacture of Sugar-Coated Pills. There's a **solubility**, a **reliability** and **therapeutic efficacy** about "Warner" Pills, that has justly earned for them a **superiority over other pills**. The same standard of excellence applies to our other specialties. For instance, Warner's Lithia Tablets (originated by us), are as preferable to other lithia tablets, as lithia tablets are superior to lithia water. And so we might go on down the line *ad infinitum*.

Some coated pills are insoluble.

All insoluble pills are **INEFFECTIVE**.

\* \* **SOME COATED PILLS ARE INEFFECTIVE.**

But in every zone experience has shown that

**All WARNER'S coated pills are effective;**

**All effective pills are necessarily SOLUBLE;**

\* \* **ALL WARNER'S COATED PILLS ARE SOLUBLE.**

Moreover, if convinced you'd be

Experiment yourself, and see

**THAT WARNER'S COATED PILLS ARE SOLUBLE.**

*Do not attempt to test the solubility or insolubility of a Pill by hammering it on a pine board.*

*What does it signify?*

**A "Warner" Pill will PRODUCE THE EFFECTS EXPECTED.**

DRUGGISTS doing a "Little Pill Trade" (*i.e.*, a Trade in Little Pills), and desirous to increase their returns, may profitably add to stock the following lines of effective, and generally appreciated Sugar-coated "**Little Liver, etc., Pills,**" viz.,



Fig. A.



Fig. C.



Fig. B.

(Fac-simile, but not showing space left on other side of wrapper for seller's label.)

List No.

142. "**Little Cathartic Granules.**"

Per 1,000, 4/-

Aloin, 1-10 gr. Podophyllin, 1-5 gr.

Ext. Hyoscy., 1-20 gr. Jalapin, 1-10 gr.

Ext. Nucis Vom., 1-20 gr. Ol. Res.

Capsici, 1-20 gr. Dose 1 to 4.

180. **Little Cath. Granules with Euonymin.**

184. "**Little Rhubarb Granules.**"

Ext. Rhei, Aloin, aa  $\frac{1}{4}$  gr. Ext. Hyos., 1-10 gr.

The word "Little" properly indicates the small bulk of these really elegant "Pillettes," which are popular, profitable, and therefore (in steadiness of demand) permanent. Supplied in bulk (*as here quoted*) or in wrapped vials as shown in above woodcuts. Labelled with or without buyer's name.

*Prices per gross on request.*

"Quick  
sellers"  
at 6d.  
retail.  
3s.  
per dozen.





# SOLUBLE=COATED PILLS

(BY W. R. WARNER & CO.)

## IN HANDSOME COUNTER-VASES.

(“Warner’s Pattern,” or “Globe-stoppered.”)

The Vases are fitted with hand-painted, gold-bordered Labels, of which the following are usually in stock. The purchaser should, when ordering, state explicitly the FORMULA and VASE-LABEL required, as for example—“Three Vases, No. 120,” labelled “**Aperient**,” “**Liver**,” and “**Compound Podophyllin**” Pills. The prices per Vase, in the following list, refer to **round** Vases, as shown above.

### SOLUBLE SUGAR-COATED.

<b>Antibilious Pills</b>	<b>Dinner Pills</b>
<b>Aperient Pills</b>	<b>Female Pills</b>
<b>Aromatic Cachous for the Breath</b>	<b>Head and Stomach Pills</b>
(Per Vase, 5/10; per lb., 3/6.)	<b>Liver Pills</b>
<b>Cathartic and Liver Pills</b>	<b>Nerve and Tonic Pills</b>
<b>Complexion Pills</b>	<b>Neuralgic Pills</b>
<b>Compound Phosphorus Pills</b>	<b>Pil. Blaud</b>
<b>Compound Podophyllin Pills</b>	“ <b>Cathart. Comp.</b>
<b>Compound Steel Pills</b>	“ <b>Rhei Co.</b>
<b>Cough Pills</b>	<b>Quinine Pills</b>
<b>Digestive Pills</b>	<b>Steel and Pennyroyal Pills</b>
	<b>Tonic Pills</b>

### DIMENSIONS OF “WARNER” (ROUND) VASES FOR SHELVING:

Smallest	Large
<b>Globe-Stoppered Vase.</b>	<b>Globe-Stoppered Vase.</b>
Height about ... 9 in.	Height about ... 13½ in.
Diameter about ... 2½ in.	Diameter about ... 4 in.
<b>Ordinary</b>	<b>Square-Shouldered Vase.</b>
<b>Globe-Stoppered Vase.</b>	Height about... 9½ in.
Height about ... 11½ in.	Diameter about ... 3½ in.
Diameter about ... 3½ in.	

No.		Vase of 1,000.	Without Vase.	No.		Vase of 1,000.	Without Vase.
25.	<b>Pil. Aloes et Asaf. B.P. (W. R. Warner &amp; Co.)</b> ... ..	7/1	4/9	28.	<b>Pil. Aloes et Myrrh. B.P.</b> ... ..	7/1	4/9
R	Pv. Aloes Soc.			R	Soc. Aloes		
	Pv. Sapon.				Crocus		
	Asafoet.				Myrrhæ		
	Conf. Rosæ				Conf. Rosæ		
26.	<b>Pil. Aloes Barbado. B.P.</b> ... ..	7/1	4/9	29.	<b>Pil. Aloes Socot. B.P.</b> ... ..	7/1	4/9
R	Barb. Aloes			R	Soc. Aloes		
	Pv. Sapon.				Ol. Myrist.		
	Ol. Carui.				Sapon.		
	Conf. Rosæ				Conf. Rosæ		
27.	<b>Pil. Aloes et Ferri B.P.</b> ... ..	7/1	4/9	30.	<b>Pil. Asafoet. Co. B.P.</b> ... ..	7/1	4/9
R	Ferri Sul.			R	Asafoetida		
	Pv. Cinnam. Co.				Galbanum		
	Pv. Aloes Barb.				Myrrh.		
	Conf. Rosæ				Theriaca		



## 8 SOLUBLE-COATED PILLS (W. R. WARNER &amp; CO.).

No.		Vase of 1,000.	Without Vase.	No.		Vase of 1,000.	Without Vase.
33.	<b>Pil. Cinchonidin. Sulph.</b> gr. ii. ...	10/6	8/2	55.	<b>Pil. Cathart. Co. (Vegetable)</b> ...	11/6	9/2
35.	<b>Pil. Coloc. Co. B.P.</b> ...	13/6	11/2	R	Podophyllin. Ext. Colocynth Res. Scammon. Aloes Soc. Sapon. Sem. Cardamom.		
	R Pv. Colocynth. Scammonia Ol. Caryoph. Pv. Aloes Barb. Potass. Sulph.			56.	<b>Pil. "Emmenagogue"</b> ...	14/	11/8
36.	<b>Pil. Coloc. et Hyos. B.P.</b> ...	12/	9/8	R	Ergotine 1 grain Ferri Sulph. Exs. 1 gr. Ext. Helleb. Nig. 1 gr. Aloes Soc. 1 gr. Ol. Savin. $\frac{1}{2}$ gtt.		
	R Pv. Colocynth. Co. Ext. Hyoseyami			58.	<b>Gran. Ext. Nuc. Vomicae</b> $\frac{1}{4}$ gr. ...	8/4	6/
38.	<b>Pil. Ferri Carb. B.P.</b> ...	10/4	8/	59.	<b>Pil. Ferri Iod. B.P.</b> ...	17/	14/8
	R Ferri Carb. Sacch. Confec. Rosae			61.	<b>Pil. "Neuralgic"</b> ...	31/	28/8
39.	<b>Pil. Hydrarg. gr. iii. B.P.</b> ...	11/4	9/	R	Quininæ Sulph. 2 gr. Strych. 1-30rh gr. Morph. Sulph. 1-20 gr. Ac. Arsen. 1-20 gr. Ext. Aconiti $\frac{1}{2}$ gr.		
40.	<b>Pil. Hydrarg. Subchlor. Co.</b> ...	9/10	7/6	63.	<b>Gran. Podophyllini</b> $\frac{1}{4}$ gr. ...	8/4	6/
	R Hyd. Subchlor. Res. Guaiaci Antimon. Sulphurat Ol. Ricini			66.	<b>Pil. Quininæ Sulph.</b> grs. ii. ...	9/4	7/6
41.	<b>Pil. Ipecac. c. Scilla B.P.</b> ...	11/	8/8	67.	<b>Pil. Rhei Comp.</b> grs. v. ...	7/6	5/2
	R Pv. Ipecac. Co. Pv. Ammoniacy Pv. Scillæ Theriaca			R	Pv. Rhei Pv. Aloes Soc. Pv. Myrrh. Ol. Menth. P.		
42.	<b>Pil. Plumbi c. Opio B.P.</b> ...	17/6	15/2	68.	<b>Gran. Strychninæ</b> gr. 1-40th (small vase) ...	10/	8/6
	R Plumbi Acet. Pv. Opii Confec. Rosae			72.	<b>Pil. "Antichlorotic"</b> ...	14/	11/8
43.	<b>Pil. Quininæ Sulph.</b> gr. i. ...	7/	4/8	R	Potass. Chlor. 100 grs. Ferri Chlor. 100 grs. Pv. Podophylli 100 grs. Pv. Myrrhæ 50 grs.		
46.	<b>Pil. Acid. Arseniosi</b> ...	9/4	7/	M	Fiat Pil. No. 100, Dose 1-2		
	1-20 or 1-30 gr.			73.	<b>Pil. "Antichoromania"</b> ...	18/6	16/2
47.	<b>Pil. "Ague"</b> ...	18/6	16/2	R	Zinci Valer. 200 grs. Ferri Valer. 25 grs. Ext. Sumbul 50 grs.		
	R Chinoidin 2 gr. Ol. Pip. Nig. 1-6 gr. Ext. Col. Co. 1-3 gr. Ferri Sul. Exs. $\frac{1}{2}$ gr.			M	Fiat Pil. No. 100, Dose 1-2		
49.	<b>Pil. "Antibilious" Veg.</b> ...	10/10	8/6	74.	<b>Pil. "Antispasmodic"</b> ...	17/6	15/2
	R Pv. Ext. Col. Co. 2 $\frac{1}{2}$ gr. Podophyllin $\frac{1}{4}$ gr.			R	Ext. Hyoseyami 50 grs. Morphiæ Acetas 10 grs. Brôm. Camphor 50 grs. Pv. Capsici 50 grs.		
50.	<b>Pil. "Antidyspeptic"</b> ...	14/6	12/2	M	Fiat Pil. No. 100, Dose 1-2		
	R Strychnia 1 40 gr. Mass. Hyd. 2 gr. Ext. Bellad. 1-10 gr. Pv. Ext. Col. Co. 2 gr. Pv. Ipecac. 1-10 gr.			75.	<b>Pil. "Antiperiodic"</b> ...	15/4	13/
51.	<b>Pil. "Aperient"</b> ...	15/	12/8	R	Cinchonidiæ Sulph. 100 grs. Res. Podophylli 5 grs. Strychniæ Sul. 3 grs. Gelsemin. 5 grs. Ferri Sulph. Exs. 50 grs. Ol. Res. Capsici 10 gtt.		
	R Ext. Nuc. Vom. 1-3 gr. Ext. Hyosey. $\frac{1}{2}$ gr. Pv. Ex. Col. Co. 2 gr.			M	Fiat Pil. No. 100, Dose 1-2		
52.	<b>Pil. Camphoræ et Hyoseyami</b> 11/		3/8	76.	<b>Pil. "Antisplenetic"</b> ...	14/	11/8
	R Camphora 1 gr. Ext. Hyoseyami 1 gr.			R	Pv. Aloes Soc. 100 grs. Pv. Ammoniacy Pv. Myrrhæ aa 50 grs. Ext. Bryoniæ 100 grs.		
53.	<b>Pil. Cathart. Co. (Exotic)</b> ...	11/6	9/2	M	Fiat Pil. No. 100, Dose 2-4		
	R Ext. Col. Co. Ext. Jalap. Calomel Pv. Cambogiæ			77.	<b>Pil. Astringent</b> ...	14/	11/8
54.	<b>Pil. Cathart. Co. (Improved)</b> ...	10/6	8/2	R	Ext. Geranii 2 grs. Pv. Opii $\frac{1}{2}$ gr. Ol. Menth. Pip 1-20 gr. Ol. Res. Zingiber. 1-20 gr.		
	R Pv. Ext. Col. Co. Leptandrin Pv. Ext. Jalapæ Ext. Hyoseyami Pv. Ext. Gentian. Podophyllin. Ol. Menth. P.			M	Fiat Pil. Dose 1-2		



## SOLUBLE-COATED PILLS (W. R. WARNER &amp; CO.).

9

No.		Vase of 1,000.	Without Vase.	No.		Vase of 1,000.	Without Vase.
78.	<b>Pil. Cathart. Cholagogue</b> ...	14/6	12/2	100.	<b>Pil. Copaibæ Co.</b> ...	14/	11/8
R	Res. Podophylli 50 grs. Pil. Hydrarg. 25 grs. Ext. Hyoscyami 12½ grs. Ext. Nuc. Vom. 6½ grs. Ol. Res. Capsici 12 gtt.			R	Pil. Copaib. Resin. Guaiac. Ferri Cit. Oleo-resin Cubeb. Dose, 2 to 4 pills.		
M	— Fiat Pil. No. 100, Dose 1-4			103.	<b>Pil. Rhei c. Hyd.</b> ...	17/6	15/2
79.	<b>Pil. "Eccoprotic"</b> ...	17/	14/8	R	Pulv. Rhei Mass. Hydrarg. } 4 grs. Sodæ Carb. Exs. }		
R	Ext. Aloes Soc. 200 grs. Ext. Nuc. Vomicae 20 grs. Res. Podophylli 30 grs. Ol. Caryophyl. 10 gtt.			109.	<b>Pil. Hepatica</b> ...	16/6	14/2
M	— Fiat Pil. No. 100, Dose 2-4			R	Pil. Hydrarg. 3 grs. Ext. Coloc. Co. 1 gr. Ext. Hyoscyami, 1 gr. Dose, 1 to 2 pills.		
80.	<b>Pil. "Laxativa"</b> ...	16/6	14/2	112.	<b>Pil. Prandii</b> ...	14/	11/8
R	Pv. Aloes Soc. 100 grs. Sulphur 20 grs. Res. Guaiaci 50 grs. Res. Podophylli 20 grs. Syr. Rhamni Q.S.			R	Ext. Aloes. Aq. 1 gr. Ext. Gentian. 2 grs. Ext. Anthemis, 1 gr. Pv. Capsici ¼ gr.		
M	— Fiat Pil. No. 100, Dose 1-2			113.	<b>Pil. Coloc. Hvd. et Ipecac.</b> ...	15/6	13/2
82.	<b>Pil. Tonici</b> ...	14/	11/8	R	Pul. Ext. Coloc. Co. 2 grs. Pil. Hydrarg. 2 grs. Pv. Ipecac. 1-8 gr.		
R	Ext. Gentianæ 100 grs. Ext. Humuli 50 grs. Ferri Carb. Sacch. 25 grs. Ext. Nuc. Vomicae 7 grs. Res. Podophylli 4 grs. Ol. Res. Zingiber. 10 gtt.			114.	<b>Pil. Prandii No. 2</b> (Chapman) ...	12/6	10/2
M	— Fiat Pil. No. 100, Dose 1-2			R	Pv. Aloes Soc. Pv. Rhei Gum Mastich. Dose, 1 to 3 pills.		
83.	<b>Pil. Hydrarg. gr. v....</b> ...	13/	10/8	116.	<b>Pil. Alterativa</b> ...	13/6	11/2
85.	<b>Pil. "Neuralgic"</b> (Brown Séguard) ...	29/6	27/2	R	Mass. Hyd. 1 gr. Pulv. Ipecac. 1-3rd gr. Pulv. Opii 1-8th gr.		
R	Ext. Hyoscyami 2-3 grs. Ext. Conii 2-3 grs. Ext. Ignat. Am. ½ gr. Ext. Opii ½ gr. Ext. Aconiti 1-3 gr. Ext. Cannab. Ind. ¼ gr. Ext. Stramon. 1-5 gr. Ext. Bellad. 1-6 gr.			117.	<b>Pil. "Anticonstipation"</b> ...	11/6	9/2
86.	<b>Pil. "Diuretic"</b> ...	12/	9/8	R	Podophyllin, 1-10th gr. Ext. Nuc. Vom. ¼ gr. Ext. Bellad. 1-10th gr. Ext. Hyoscy. ¼ gr. Pv. Capsici ¼ gr. Dose, 1 to 4 pills.		
R	Pv. Saponis Hispan. Sodii Carb. Exs. Ol. Baccæ Juniperi.			118.	<b>Pil. Digitalis Co.</b> ...	12/6	10/2
88.	<b>Pil. Aperiens sine Calomel</b> ...	12/6	10/2	R	Pv. Digitalis 1 gr. Pv. Scillæ, 1 gr. Pv. Nit. Potass. 2 grs.		
R	Ext. Coloc. Co. Pv. Jalap. Ext. Aloes Sapo. Mollis. Gingerine			120.	<b>Pil. "Cathartic and Liver"</b> ...	6/4	4/
89.	<b>Pil. Aperiens c. 1-3 gr. Calomel</b> ...	12/6	10/2	R	Podophyllin ¼ gr. Ext. Colocynth. ½ gr. Pv. Soc. Aloes 1 gr. Pv. Scammon. ½ gr. Pv. Saponis 1-8th gr. Ext. Hyoscyami 1-8th gr. Gingerine 1-8th gr. Dose, 2 to 4 pills as a purgative, 1 to 2 pills as an aperient.		
(As No. 88, but with 1-3 gr. Calomel)				121.	<b>Pil. Pot. Iodid.</b> grs. ii. ...	18/6	16/2
90.	<b>Pil. Coloc. c. Hyd.</b> ...	14/6	12/2	122.	<b>Pil. Quininæ Bi-sulph.</b> ½ gr. ...	6/2	3/10
R	Ext. Coloc. Co. 2½ grs. Pil. Hydrarg. 2½ grs.			123.	<b>Pil. Quininæ Bi-sulph.</b> grs. iii. ...	14/4	12/
91.	<b>Pil. Coloc. c. Hvd. et Hyos.</b> ...	12/6	10/2	124.	<b>Pil. Quininæ Bi-sulph.</b> grs. v. ...	22/4	20/
R	Ext. Coloc. Co. 2 grs. Pil. Hydrarg. 1 gr. Ext. Hyoscyami 1 gr.			125.	<b>Pil. Rhei Co. B.P.</b> (small) grs. iii. ...	6/10	4/6
92.	<b>Gran. Calcium Sulphide</b> 1-10 gr. ...	7/10	5/6	R	Pv. Aloes Soc. Pv. Rhei Pv. Myrrhæ Pv. Saponis Ol. Menth. P. Dose, 2 to 4 pills.		
93.	<b>Gran. Calcium Sulphide</b> ¼ gr. ...	7/10	5/6				
94.	<b>Gran. Calcium Sulphide</b> ½ gr. ...	7/10	5/6				
95.	<b>Pil. Calcium Sulphide</b> gr. i. ...	9/4	7/				
96.	<b>Pil. Calomel</b> gr. ii. ...	9/6	7/2				
97.	<b>Pil. Opii.</b> gr. i. ...	13/	10/8				
99.	<b>Pil. Rhei U.S.P.</b> ...	17/6	15/2				



## 10 SOLUBLE=COATED PILLS (W. R. WARNER &amp; CO.).

No.		Vase of 1,000.	Without Vase.		Vase of 1,000.	Without Vase.
126.	<b>Pil. Cathart. Co.</b> (active)... Ditto, per lb. bottle, 5/6. R Aloes, grs. ii. Cambioe gr. ss. Canada Snake Root $\frac{1}{4}$ gr. Calomel gr. 1-10 Ol. Tiglli gr. 1-20	6/10	...	151.	<b>Pil. Hyd. c. Creta</b> $\frac{1}{2}$ gr. (small vase) ...	4/10 3/4
127.	<b>Pil. Morph. Sulph.</b> $\frac{1}{4}$ gr. ...	17/	14/8	152.	<b>Pil. Hyd. c. Creta</b> , 1 gr. (ditto) ...	5/6 4/
128.	<b>Pil. "Antimalarial"</b> ... R Quininæ Sulph. 1 gr. Cinchoninæ Sulph. $\frac{1}{2}$ gr. Ferri Sul. Exs. $\frac{1}{4}$ gr. Acid. Arsenious 1-40 gr. Dose, 1 to 2 pills.	39/6	37/2	156.	<b>Pil. Ext. Cocæ</b> , grs. iii. ...	18/4 16/
129.	<b>Pil. Digestiva</b> ... R Pepsina Conc. gr. i. Pv. Nuc. Vom. $\frac{1}{4}$ gr. Gingerine 1-16 gr. Sulphur, 1-8 gr. Dose, 1 to 2 pills.	12/6	10/2	157.	<b>Pil. Pot. Permang.</b> 2 grs....	18/ 15/8
131.	<b>Gran. Iodide of Mercury</b> 1-8 gr. 9/6 Dose, 1 to 4 granules.	9/6	7/2	159.	<b>Pil. Antiseptic Co.</b> ... R Sulobite Soda, 1 gr. Salicylic Acid, 1 gr. Ext. Nuc. Vom. 1-8 gr. Pulv. Capsici, 1-10 gr. Conc'd Pepsin, 1 gr.	19/6 17/2
133.	<b>Pil. Quininæ Bi-sulph.</b> grs. ii. 9/4	9/4	7/	160.	<b>Pil. Syphilitic</b> ... R Potass. Iod. $2\frac{1}{2}$ grs. Hyd. Chlor. Corros. 1-40 gr.	19/4 17/
134.	<b>Pil. Podoph. et Hyos.</b> ... R Podophyllin $\frac{1}{2}$ gr. Ext. Hyosey. $\frac{1}{2}$ gr.	19/6	17/2	162.	<b>Pil. Quin. c. Fer. Carb.</b> ... R Quin. Sulph. 1 gr. Ferri Carb. 2 grs.	35/8 33/2
135.	<b>Pil. Rhei Co. B.P.</b> gr. iv. ...	6/10	4/6	163.	<b>Pil. Blaud</b> (White) No. 2 ...	9/10 7/6
136.	<b>Pil. "Chalybeate"</b> (Blaud) ... R Ferri Sulph. gr. jss. Potassæ Carb. gr. jss. (Pink-coated.)	13/	10/8	164.	<b>Pil. Cascara Co.</b> , grs. iii.... R Ext. Casc. Sag. grs. iii. Podophyllin, 1-8 gr.	18/6 16/2
137.	<b>Pil. Calomel</b> gr. i. ...	9/4	7/	167.	<b>Pil. Blaud Ferruginous</b> , grs. iii. 10/10	8/6
138.	<b>Pil. Aloes et Nuc. Vom.</b> ... R Pulv. Aloes Soc. gr. 1 1-3 Ext. Nuc. Vom. gr. ss.	9/	6/8	168.	<b>Pil. Blaud</b> grs. v. ...	7/4 5/
140.	<b>Pil. Camphoræ</b> $\frac{1}{2}$ gr. ...	9/	6/8	169.	<b>Pil. Chalybeate Co.</b> ... R Ferri Sulph. gr. jss. Potass. Carb. gr. jss. Ext. Nuc. Vom. 1-6 gr.	19/4 17/
141.	<b>Pil. Arthrosia</b> ... R Acidi Salicylici Ext. Colchici Ext. Phytolacca Res. Podophyllini Quinine Pv. Capsicum Dose, 2 to 4 pills.	12/10	10/6	172.	<b>Pil. Cochiaæ</b> ... R Pulv. Aloes Socot. $\frac{1}{2}$ gr. Canella $\frac{1}{4}$ gr. Fer. Sulph. Exs. 1 gr. Pulv. Sapo. Alb. $\frac{1}{4}$ gr. Pulv. Zingib. $\frac{1}{4}$ gr.	6/10 4/6
142.	<b>Gran. Cathart. Co.</b> ("Little Cathartic Granules") smallest vase ... R Aloin, 1-10 gr. Podophyllin, 1-5 gr. Ext. Hyosey. 1-20 gr. Jalapin, 1-10 gr. Ext. Nuc. Vom. 1-20 gr. Ol. Res. Capsici, 1-20 gr. Dose, 1 to 4.	5/6	4/	173.	<b>Pil. Rhei Co. P.B.</b> grs. $4\frac{1}{2}$ ... R Pulv. Aloes Soc. Pulv. Rhei Pulv. Myrrhæ Ol. Menth. P.	7/6 5/2
143.	<b>Gran. Podophyllini</b> $\frac{1}{2}$ gr....	11/6	9/2	174.	<b>"Mandrake Liver Pills"</b> ... R Podophyllin $\frac{1}{4}$ gr. Ext. Colocynth $\frac{1}{2}$ gr. Pv. Soc. Aloes $\frac{3}{4}$ gr. Pv. Scammon. $\frac{1}{4}$ gr. Pv. Saponis 1-8 gr. Ext. Hyoseyami 1-8 gr. Gingerine 1-8 gr. Dose, 2 to 4 pills as a purgative, 1 to 2 pills as an aperient.	12/ 9/8
144.	<b>Pil. Pot. Permang.</b> 1 gr....	16/	13/8	176.	<b>Pil. Podoph. Co. Eclectic</b> ... R Podophyllin 1-8 gr. Leptandrin 1-16 gr. Juglandin 1-16 gr. Macrotin 1-32 gr. Dose, 2 to 4.	12/ 9/8
145.	<b>Pil. "Rheumatic"</b> ... R Ext. Coloc. Co. $1\frac{1}{2}$ grs. Ext. Colch. Ac. 1 gr. Ext. Hyos. 1-3 gr. Hyd. Chlor. Mit. 1-3 gr.	16/	13/8	177.	<b>Pil. Sumbul. Co.</b> (Dr. Goodell) ... R Ext. Sumbul. gr. i. Asafetida, grs. ii. Ferri Sulph. Exs. gr. i. Acid. Arsen. gr. 1-40 Dose, 1 to 2.	35/6 33/2
150.	<b>Pil. Cochiaæ</b> ... R Aloes Cape, 2 grs. Gamboge, 1 gr. Jalap. $\frac{1}{2}$ gr. Sapo. $\frac{1}{4}$ gr. Zingib. $\frac{1}{4}$ gr. Ol. Caryoph. 1-16 gr.	6/10	4/6	178.	<b>Pil. Quininæ Sulph.</b> grs. iii. ...	14/4 12/



## SOLUBLE=COATED PILLS (W. R. WARNER &amp; CO.).

11

No.		Vase of 1,000.	Without Vase.			Vase of 1,000.	Without Vase.
180.	<b>Gran. Cathart. Co. c. Euony- min</b> (small vase) ... .. 5/6	4/		191.	<b>Pil. Iodoformi et Quin.</b> ... .. 19/6	17/2	
B	Aloin 1-10 gr. Euonymin 1-5 gr. Ext. Hyoscy. 1-20 gr. Jalapin. 1-10 gr. Ext. Nuc. Vom. 1-20 gr. Ol. Res. Capsici. 1-20 gr.			B	Iodoform, gr. ss. Quinine Bisulph. gr. ss.		
181.	<b>Pil. Ferri et Canella et Pulegii</b> 10/10	8/6		194.	<b>Pil. Cascara Alternative</b> (Dr. Leutaud) ... .. 18/8	16/2	
B	Ferri Redact. 2 grs. Pv. Aloes Barb. 1½ gr. Pv. Canella 1½ gr. Ol. Pulegii 1 m. Ol. Rutæ 1 m. Decoc. Aloes q.s.			B	Cascarin ¼-gr. Stillingia ¼ gr. Euonymin 1-8 gr. Piperine 1-100 gr. (Pink coated.)		
183.	<b>Pil. Cascara Cathartica</b> (Dr. Hinkle) ... .. 18/6	16/2		196.	<b>Pil. "Cathartic and Liver"</b> (with Calomel) ... .. 6/4	4/	
B	Cascarin Aloin aa ¼ gr. Podophyllin 1-6 gr. Ext. Bellad. 1-8 gr. Strychnia 1-60 gr. Gingerine 1-8 gr. Dose 1 to 2.			B	Calomel gr. ss. Ext. Coloc. gr. ss. Pv. Aloes Soc. gr. i. Pv. Scammon. ¼-gr. Pv. Saponis 1-8 gr. Ext. Hyos. 1-8 gr. Gingerine, 1-8 gr.		
184.	<b>Little Rhubarb Granules</b> (small vase) ... .. 5/6	4/		197.	ditto (with Castor Oil) ... .. 6/4		
B	Ext. Rhei Aloin aa ¼-gr. Ext. Hyos. 1-10 gr.				Identical with that of No. 120, but with the addition of Castor Oil.		
	<b>Pil. Blaud</b> ... .. 5/6	3/2		198.	<b>Pil. Damianæ, Phos. et Nuc. Vom.</b> ... .. 12/4	10/	
	Supplied also in lots of 20,000 and upwards at specially low prices.			B	Phosphorus 1-30 gr. Fer. red 1½ gr. Ext. Damian. 2 gr. Ext. Nuc. Vom. 1-6 gr. P. Capsici 1-6 gr.		
187.	<b>Pil. Sumbul. Aper.</b> (Dr. Shoe- maker) ... .. 37/	34/8		200.	<b>Pil. "Complexion"</b> (Pink) ... .. 6/10	4/6	
B	Ext. Sumbul. 1 gr. Asafetida 1 gr. Ext. Cascar. Sag. ½-gr. Aloin ¼-gr. Ext. Nuc. Vom. 1-8 gr. Gingerine ¼-gr.			203.	<b>Pil. Arsenical Co.</b> ... .. 7/4	5/-	
188.	<b>Pil. "Steel and Pennyroyal Improved"</b> (Pink) ... .. 6/10	4/6		B	Calcium Sulph. ¼-gr. Ac. Arsenious 1-100 gr. Mass. Blaud 2 gr. Ext. Sarsap. 1 gr. (Pink coated.)		
B	Pv. Aloes 3-8 gr. Canella 3-16 gr. Fer. Sul. Exs. ¾-gr. Sapo. 3-16 gr. Zingib. 3-16 gr. Ol. Pen. q.s. (Pink coated.)			547.	<b>Gran. Quassin</b> , 1-65 gr. (1 milli- gramme) ... .. 14/	11/8	
189.	<b>Pil. Gonorrhœa</b> ... .. 13/6	11/2		614.	<b>Pil. Quininæ Sulph.</b> grs. ii. ... .. 9/10	7/6	
B	Pulv. Cubebæ 2 grs. Bals. Copaibæ 1 gr. Ferri Sulph. Exs. ½-gr. Terebinth. Venet. ½-gr. Dose, 1 to 3 pills.				Med. prop.—Tonic, Antiperiodic. Dose, 1 to 3.		
				625.	<b>Pil. Blaud Ferruginous</b> , grs. iii. (Gelatine Coated) ... .. 9/4	7/	
				627.	<b>Pil. Blaud Ferruginous</b> , grs. v. (Gelatine Coated) ... .. 11/4	9/	
				628.	<b>Pil. Peristaltic</b> ... .. 14/6	12/2	
				B	Aloin ¼-gr. Strychnin. 1-60 gr. Ext. Bellad. 1-8 gr. Ipecac. 1-16 gr.		
				631.	<b>Pil. Blaud</b> , grs. iii. ... .. 5/10	3/6	
					(Gelatine Coated)		

## PILLS IN BULK PACKAGES OF 5,000, &amp;c.

No.		Per Vase.	Without Vase.	No.		Per Vase.	Without Vase.
41.	<b>Pil. Ipecac. c. Scilla, B.P.</b> (W. R. Warner & Co.), per tin of 5,000 ...		37/6	75.	<b>Pil. Antiperiodic</b> , per tin of 5,000 ... ..		57/6
B	Pv. Ipecac. Co. Pv. Ammoniaci Pv. Scillæ Theriaca			B	Cinchonidiæ Sulph. 100 grs. Res. Podophylli 5 grs. Strychniæ Sul. 3 grs. Gelsemin. 5 grs. Ferri Sulph. Exs. 50 grs. Ol. Res. Capsici 10 gtt.		
49.	<b>Pil. Antibilious Veg.</b> per tin of 5,000 ... ..	26/8		M	Fiat Pil. No. 100, Dose 1-2.		
	ditto per tin of 10,000 ... ..	50/					
	ditto " 20,000 ... ..	95/					
B	Pv. Ext. Col. Co. 2½ gr. Podophyllin ¼-gr.						



No.	Per Vase.	Without Vase.	No.	Per Vase.	Without Vase.
78. <b>Pil. Cathartic</b> (Cholagogue), per tin of 5,000 ... ..		60/	174. <b>Mandrake Liver Pills</b> (same rates as No. 120).		
B Res. Podophylli 50 grs. Pil. Hydrarg. 25 grs. Ext. Hyoscyami 12½ grs. Ext. Nuc. Vom. 6½ grs. Ol. Res. Capsici 12 gtt.			B Podophyllin ¼-gr. Ext. Colocynth ¼-gr. Pv. Soc. Aloes ¼-gr. Pv. Scammon. ¼-gr. Pv. Saponis 1-8 gr. Ext. Hyoscyami 1-8 gr. Gingerine 1-8 gr. Dose, 2 to 4 pills as a purgative, 1 to 2 pills as an aperient.		
M — Fiat Pil. No. 100, Dose, 1-4.			180. <b>Gran. Cathart. Co. c. Euonymin</b> (same prices as for No. 142).		
117. <b>Pil. Anticonstipation</b> , per tin of 5,000 ... ..	42/6		B Aloin 1-10 gr. Euonymin 1-5 gr. Ext. Hyoscy. 1-20 gr. Jalapin. 1-10 gr. Ext. Nuc. Vom. 1-20 gr. Ol. Res. Capsici. 1-20 gr.		
B Podophyllin 1-10th gr. Ext. Nuc. Vom. ¼-gr. Ext. Bellad. 1-10th gr. Ext. Hyoscy. ¼-gr. Pv. Capsici ¼-gr. Dose, 1 to 4 pills.			181. <b>Pil. Ferri et Canella et Pulegii</b> , per tin of 5,000 ... ..	40/	
120. <b>Pil. "Cathartic and Liver"</b> ... ditto per bulk package of 10,000...	17/6 34/2		B Ferri Redact. 2 grs. Pv. Aloes Barb. 1½ gr. Pv. Canella 1½ gr. Ol. Pulegii 1 m. Ol. Rutæ 1 m. Decoc. Aloes q.s.		
B Podophyllin ¼-gr. Ext. Colocynth. ½-gr. Pv. Soc. Aloes 1 gr. Pv. Scammon. ¼-gr. Pv. Saponis 1-8th gr. Ext. Hyoscyami 1-8th gr. Gingerine 1-8th gr. Dose, 2 to 4 pills as a purgative, 1 to 2 pills as an aperient.			183. <b>Pil. Cascara Cathart.</b> (Dr. Hinkle), per tin of 5,000 ... ..	71/3	
125. <b>Pil. Rhei Co.</b> 3 grs. package of 5,000 ... ..	20/38/		B Cascarin Aloin aa ¼ gr. Podophyllin 1-6 gr. Ext. Bellad. 1-8 gr. Strychnia 1-60 gr. Gingerine 1-8 gr. Dose, 1 to 2.		
ditto per bulk package of 10,000...			184. <b>Little Rhubarb Granules</b> per bulk package of 5,000 ditto 10,000	17/6 32/6	
B Pv. Aloes Soc. Pv. Rhei Pv. Myrrhæ Pv. Saponis Ol. Menth. P. Dose, 2 to 4 pills.			B Ext. Rhei Aloin aa ¼-gr. Ext. Hyos. 1-10 gr.		
6. <b>Pil. Cathart. Co.</b> (Active) 6 lbs. for ditto 12 lbs. for ... ..	30/57/6		185. <b>Pil. Blaud</b> , per tin of 10,000... ..	30/	
B Aloes grs. ii. Camboge gr. ss. Canada Snake Root ¼-gr. Calomel gr. 1-10 Ol. Tigllii gr. 1-20			Special prices for quantities of 20,000, 57/6; 50,000, £6 17s. 6d.		
129. <b>Pil. Digestiva</b> , per bulk package of 5,000 ... ..	47/6		188. <b>Pil. Steel and Pennyroyal Improved</b> (pink), per tin of 10,000...	38/4	
B Pepsina Conc. gr. i. Pv. Nuc. Vom. ¼ gr. Gingerine 1-16 gr. Sulphur. 1-8 gr. Dose, 1 to 2 pills.			B Pv. Aloes 3-8 gr. Canella 3-16 gr. Fer. Sul. Exs. ¼-gr. Sapo. 3-16 gr. Zingib. 3-16 gr. Ol. Pen. q.s. (Pink coated.)		
135. <b>Pil. Rhei Co. B.P.</b> grs. iv. (same prices as No. 125 for bulk tins)			196. <b>Pil. "Cathartic and Liver"</b> (with Calomel) (same rates as No. 120.)		
142. <b>Gran. Cathart. Co.</b> (Little Cathartic Granules) 5,000 ... .. 19/10	17/6 32/6		B Calomel gr. ss. Ext. Coloc. gr. ss. Pv. Aloes Soc. gr. i. Pv. Scammon. ¼ gr. Pv. Saponis 1-8 gr. Ext. Hyos. 1-8 gr. Gingerine, 1-8 gr.		
ditto 10,000 in plain bottle ...			197. ditto with Castor Oil, at similar prices.		
B Aloin 1-10 gr. Podophyllin 1-5 gr. Ext. Hyoscy. 1-20 gr. Jalapin 1-10 gr. Ext. Nuc. Vom. 1-20 gr. Ol. Res. Capsici 1-20 gr. Dose 1 to 4.			B Identical with that of 120, but with the addition of Castor Oil.		
163. <b>Pil. Blaud</b> (White) No. 2, per bottle of 5,000 ...	35/		200. <b>Pil. "Complexion,"</b> per tin of 5,000 ... ..	20/	
172. <b>Pil. Cochiae</b> , per tin of 5,000 ...	19/9		ditto per tin of 10,000 ... ..	37/6	
B Pulv. Aloes Socot. ¼-gr. Canella ¼-gr. Fer. Sulph. Exs. 1 gr. Pulv. Sapo. Alb. ¼-gr. Pulv. Zingib. ¼-gr.					
173. <b>Pil. Rhei Co.</b> gr. iv½, 5,000 for ...	25/				
B Pulv. Aloes Soc. Pulv. Rhei Pulv. Myrrhæ Ol. Menth. P.					

For Prices of SMALL BOTTLES (100 or 500 Pills) of any of the above, and for numerous Formulæ not here listed, see NEWBERRY'S ANNUAL CATALOGUE.

F. NEWBERRY & SONS (Estd. over 150 Years), 27 & 28, CHARTERHOUSE SQUARE, LONDON, E.C.



# MISCELLANEOUS PREPARATIONS BY W. R. WARNER & CO.

	Retail. s. d.	Per Doz. £ s. d.		Retail. s. d.	Per Doz. £ s. d.
<b>W. R. Warner &amp; Co.'s</b> Antiseptic Pastilles (Dr. Carl Seiler) ... ..	1 0	0 7 9	Ingluvin (stamped) ... ..	4 6	2 8 0
Bronchial Tablets in card boxes with "anti-stamp" labels ... ..	0 6	0 2 9	Ditto Compressed, 5 grs. ... ..	4 6	2 8 0
Ditto, 1 doz. for 2/6			Liqueur Coca (Wine of Erythroxyton Coca) ... ..	4 6	2 8 0
Cachoux Aromatisés, silvered and bur- nished —			Liquid Pancreopepsine ... ..	4 6	2 8 0
per elegant Counter-Vase ... 5/10			"Neivitone" (or "Tono-Nervine") Tablets	4 6	2 2 6
per 1 lb. bottle for refilling, 3/6			Parvules, various ... ..	1 6	0 10 3
(Also in bulk at per cwt.)			Ditto, 500's... ..		2 3 0
Corrosive Sublimate Tablets (25 in bot.)	1 0	0 8 0	Ditto, 1000's ... ..		3 19 6
Ditto... .. (50 in bot.)		0 17 0	Quinine Pills, in neat card boxes, for the pocket ... ..		0 2 0
Ditto... .. (100 in bot.)		1 13 6	Wine of Coca ... .. (pints)	4 6	2 4 0
Chocolate Worm Tablets... ..	0 6	0 2 9	Syr. Phytolacca Comp. (unstamped for dispensing) ... ..	4 0	1 13 0
Dialysed Iron ... .. (1 lbs.)	2 0	0 18 0			
Elixir Acid. Salicylic. Co. (unstamped for dispensing) ... ..	4 0	2 3 6			
Ditto, stamped ... ..	4 6	2 9 6			
Elixir Cascara (unstamped for dis- pensing) ... ..	3 0	1 8 0			
Ditto, stamped ... ..	3 6	1 14 0			
"Eonine" Cachoux of violet tint and exquisite fragrance, per crystal- stoppered jar, elegantly labelled, 5/9					
Fluid Extract of Cascara Sagrada ( $\frac{1}{2}$ pts.)	2 9	1 10 0			
Fluid Extract of Cascara Sagrada (pts.)	4 6	2 6 0			
Fluid Extract of Coca (pints) each 10/3					
Glycerine Suppositories (in bottles), Adults' or Children's ... ..	1 0	0 8 3			
<b>Granular Effervescent Salts.</b> viz. :—					
Antalgic Saline (unstamped) ... ..	3 6	1 12 6			
Aperient ditto ... ..	2 0	0 19 6			
Benzoate of Lithia ... ..	3 6	1 12 6			
Bromide of Lithia ... ..	3 0	1 7 0			
Bromo Lithia ... ..	1 9	0 16 0			
Bromo Potash ... ..	3 0	1 10 0			
Bromo Soda (Registered) ... ..	3 6	1 12 6			
Case of 1 doz. 30/-					
Caffeine and Bromide of Potash ... ..	2 0	0 18 0			
Chalybeate Saline ... ..	2 6	1 3 0			
Hydrobromate of Caffeine (miniature size) ... ..	0 5	0 2 11			
Kissingen Salt ... ..	1 9	0 14 6			
Lithia Salt (Alkaline) ... ..	3 0	1 5 0			
Phosphate of Soda (stamped) ... ..	2 0	0 18 0			
Salicylate of Lithia (unstamped for dispensing) ... ..	3 0	1 7 0			
Salicylate of Soda (unstamped for dis- pensing) ... ..	3 0	1 5 6			
Ditto, stamped ... ..	3 6	1 11 6			
Triple Bromides (Bromides of Am- monium, Potash and Sodium) ... ..	3 6	1 12 6			
Vichy Salt ... ..	1 9	0 14 6			
Ingluvin (unstamped for dispensing) ...	4 0	2 4 0			
Ditto ditto 4 ozs. each, 11/6					



(Fac-simile, reduced size.)

**Tono-Sumbul**, a pleasant aromatic  
"Pick-Me-Up" and Tonic, in  
elegant wedge-shaped bottles ... 3 6 1 13 0

"UP-TO-DATE" PHARMACISTS are reminded that Special Literature, treating of the above Preparations, is periodically Mailed to Medical Men. What the doctor prescribes the patient must have; and this is just what the up-to-date man will always be ready to sell!

These elegant pharmaceutical products are obtainable from all Wholesale Houses, and from the Sole British Depot,

**F. NEWBERRY & SONS, 27 & 28, Charterhouse Square, London, E.C.**



# NEWBERY'S IMPROVED REGISTERED OVAL PEDESTAL PILL VASES,

WITH  
VITRIFIED OPAL GLASS LABELS.  
IN PERMANENT PINK OR BLUE.

**Gilt Bordered and Hand-Painted.**

In three sizes, viz., exact dimensions of woodcut, which is supplied with either of the following Labels, viz.,

"Little Antibilious Pills."	"Little Digestive Pills."
"Aperient Pills."	"Dinner Pills."
"Cathartic "	"Neuralgic Pills."
"Rhubarb "	"Quinine Pills."
"Little Podophyllin Pills."	
"Steel and Pennyroyal Pills."	

Per Vase of 3,000 "Little" Pills, Formula 142, 180, or 184  
("Little Rhubarb," &c.), 14/6.

Also in two larger sizes, of which dimensions are given at foot of this page.

These Vases, singly or in a series, form a striking and artistic ornament, suitable to a Pharmacy of the highest class. For narrow side-shelves, &c., an arrangement of small vases on either side with the large in the centre, will prove unequalled for effect.

Labelled as follows only—**SOLUBLE SUGAR-COATED.**

Antibilious Pills.	Gout Pills.
Aperient Pills.	Gout and Rheumatic Pills.
Castor Oil Pills.	Iron Tonic Pills.
"Complexion" Pills.	Liver Pills.
Compound Podophyllin Pills.	Neuralgic Pills.
Compound Steel Pills.	Pennyroyal Pills.
Digestive Pills.	Pil. "Bland."
Dinner Pills.	Rheumatic Pills.
Female Pills.	Tonic Pills (Bland).

These Vase-Labels involve no "Medicine Duty Liability."

**REDUCED PRICES**—Filled with Soluble Sugar-Coated Pills (these registered Vases are supplied ONLY with Pills).

	Ordinary Size containing 1000 Pills.	Largest Vase containing 2000 Pills.
	£ s. d.	£ s. d.
Vase of (No. 120) Cathartic and Liver Pills	0 8 0	0 13 0
" " 126 (Active)	0 8 6	0 14 0
" " 125 or 135 Pil. Rhei Co. "	0 8 6	0 14 0
" " 75 Antiperiodic	0 17 0	1 11 6
" " 27 Aloes c. Fer. B.P. ...	0 8 9	0 15 0
" " 29 Aloes Socot. B.P. ...	0 8 9	0 15 0
" " 41 Ipecac. c. Scilla B.P. ...	0 12 6	1 2 6
" " 49 Antibilious Veg. ...	0 12 6	1 2 6
" " 91 Coloc. Hyd. et Hyos. ...	0 14 6	1 6 6
" " 117 Anticonstipation ...	0 13 6	1 3 6
" " 141 Arthrosia ...	0 15 0	1 6 6
" " 142, 180, or 184, Little Cathartic, &c. (small Vase)...	0 7 0	
" " 145 Rheumatic ...	0 17 6	1 12 6

Any other formula in this List supplied at proportionate rates.



100 Circular Labels are here represented (assorted or not) free, on request, with every £1 worth of Sugar-coated Pills in the List of W. R. WARNER & Co. (They are best adapted to No. 142, 180, or 184.)

Price per 100, any kind, if required separately, 4d.; 1,000 assorted or not, 1/8.

- |                                     |  |
|-------------------------------------|--|
| No. 1. Little Antibilious Pills.    | No. 7. Compound Euonymin Pearls.       |
| " 2. Little Aperient Granules.      | " 8. Little Comp. Rhubarb Pills.       |
| " 3. Little Cathartic Granules.     | " 9. Sugar-coated Little Liver Pearls. |
| " 4. Sweet Little Liver Granules.   | " 10. Sweet Little Dinner Pills.       |
| " 5. May Apple Liver Pills.         | " 11. Sweet Little Digestive Pills.    |
| " 6. Little Comp. Podoph. Granules. |  |

Screw-capped Pill Tubes, "No. 2 B, 1 dram Narrow, the size adapted to the profitable retail sale of "Little" Pills, 9/- per gross.

**DIMENSIONS FOR SHELVING.**

Smallest Pedestal Vase, as Woodcut,  
Medium (ordinary), ditto, height about 11 ins.; breadth about 3 1/2 ins.  
Largest (or third-size) ditto, height about 13 1/2 ins.; breadth about 4 1/2 ins.

**F. NEWBERY & SONS (Estd. over 150 Years),  
27 & 28, Charterhouse Sq., LONDON, E.C.**





# "BLAUD" PILLS AND TABLETS.

## "BLAUD" PILLS, <sup>Pink,</sup> Sugar-coated.

In screw metal-capped square Bottle, elegantly labelled. Specially designed artistic wrappers in *glazed green*, as here shown, per doz. 5/3.

Per gross 60/-, in lots of 6 dozen and upwards.

Gelatine-coated, ovoid or round, in square actinic Bottles of 100, each in *buff* carton case, per doz. 4/6.



Height about 11 inches.  
Vase with Label in Gold  
and Colours.  
Each, filled, net, 5/10.

COUNTER-VASE.

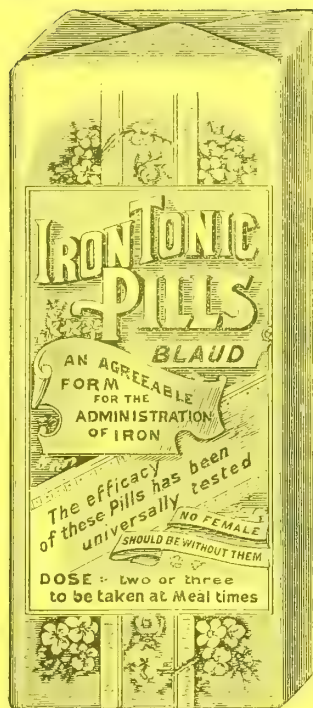
PIL. BLAUD.

## "BLAUD" PILLS,

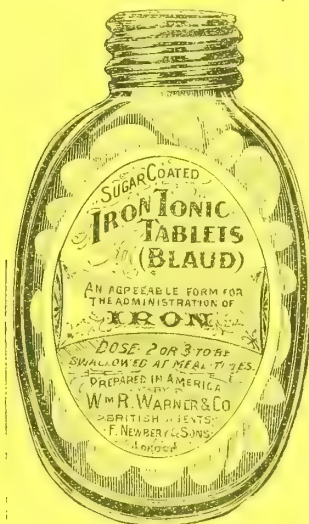
BY

W. R. WARNER  
& CO.,

Reach  
the  
Consumer  
through  
the  
Retail  
Druggist  
only.



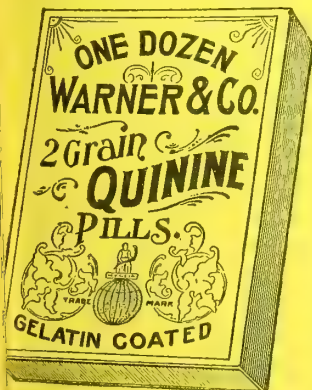
(Fac-similes, full size.)



## "BLAUD" TABLETS, <sup>Sugar-</sup> coated.

In oval screw-capped Flasks, with artistically engraved label as here shown.

No retail price given. Per dozen 3/-, or 6 dozen for 16/6.



## QUININE PILLS

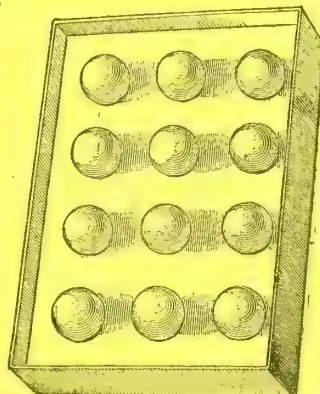
In Slide Boxes,

Containing 12 Gelatine-coated, 2 gr. Pills.

(Price subject to market fluctuation.)

Per doz. 2/-.

Supplied in parcels of a gross and upwards, printed with buyer's name and address.





# "EFFERVESCENTS"

(W. R. Warner & Co.)



An elegant, portable, and effectual remedy in **Gout, Rheumatism, Gravel, Stone in the Bladder, Eczema, Bright's Disease, &c.** In Compressed Lentiforms, each containing three or five grains of Citrate of Lithia, and affording a convenient method for administering a definite quantity of Soluble Lithia in a pleasant form, besides the advantage of having fresh water with each dose; presenting a therapeutic value of a higher standard than the various spring waters, which oftentimes contain but an indefinite quantity of the necessary salt.

The dose of artificial Lithia water as prepared from Warner & Co.'s Compressed Lentiforms can be regulated very readily by dissolving one or more in any desired quantity of water, from a tumblerful to a pint, quart, or gallon, as may be indicated. Per Bottle, 3 grs., **1s., 5 grs., 1s. 6d.**

**BROMO-SODA (Registered).** Bromide of Sodium with Caffeine, in the granular form. Very carefully and evenly made. Invaluable in Brain Fatigue arising from Overwork, &c. The *Lancet* (August 6, 1887, p. 265) stated that "the sodium compound does, in fact, agree better (than the potassium salt) with some stomachs." Per bottle, **3s. 6d.**



**GRANULAR EFFERVESCENT BROMO-LITHIA.**—Each Dessertspoonful contains—*R. Salicylate Lithia*, 10 grs., and *Bromide Soda*, 10 grs.—Bromo-Lithia is an extremely potent and palatable effervescent combination of the above ingredients. Physicians appreciate its value in treatment of those affections for which Lithia is prescribed. Bromo-Lithia, Bromo-Soda, Bromo-Potash, &c., are originated by W. R. Warner & Co.

Bromo-Lithia will be found to possess advantage over Salicylic Acid, combining, as it does, the potency of Lithium with Salicylic Acid, as well as the sedative properties of Bromide of Soda.

Bromo-Lithia (Warner & Co.), being an effervescent salt, furnishes an elegant and convenient form for applying Dr. Garrod's methods. Per Bottle, **1s. 9d.**

In many cases of obesity Dr. C\*\*\* has prescribed Kissingen and Vichy Water alternating each day, with the result that the excess of fat was progressively reduced without endangering the patient's general health.

These remedies are presented in two forms, namely, as a **GRANULAR EFFERVESCENT SALT**, and as an **EFFERVESCENT TABLET**. Both forms afford a convenient and economical method of administering "Kissingen" and "Vichy."



**EFFERVESCENT VICHY LENTIFORMS.**—Replacing the Bottled Spring Waters, which are cumbersome and often of doubtful strength medicinally.—These Lentiforms present the remedy in a portable, economical and pleasant form, and ensure a definite strength at all times. To prepare a draught as of the natural water, dissolve one Lentiform in a glass of pure water and drink while effervescing. For a warm draught use tepid water. Per bottle, **1s.**

The large compressed tablets known as "Lentiforms" are especially suitable for the extempore preparation of effervescent mineral waters, and Warner's Effervescent Lithia, and Vichy Lentiforms, specimens of which have been sent by Messrs. F. Newbery & Sons, seem well adapted for presenting the remedies in a portable, economical, and pleasant form, besides ensuring a definite strength at all times. The Vichy Lentiforms are intended to replace the bottled spring waters, and, since their first introduction, have been materially improved, being now capable of preservation for a much longer period than formerly, without impairment of their medicinal qualities.—*Pharmaceutical Journal.*

Depot: **F. NEWBERY & SONS** (Established 1746), 27 & 28, Charterhouse Square, London, E.C.



Telegraphic Address { ODDMENTS, LONDON.

A.B.C. CODE USED.

# Marshall's Limited

MANUFACTURERS,  
IMPORTERS, and EXPORTERS.

27, Red Lion Square,  
LONDON, W.C.

MANUFACTURING

**CHEMISTS, PERFUMERS,**

**Druggists, Sundriesmen,**

AND

**PACKERS TO THE TRADE.**

ORIGINAL AND LARGEST FILLERS OF    x    x

FLEXIBLE ENAMELLED

## COLLAPSIBLE TUBES

IN BEAUTIFUL ART SHADES.

**PROPRIETORS**  
OF

Marshall's "Reel" Fly Catcher.  
" Fly Papers.  
" Tube Fly Catcher.  
Hill's Cajuput Jelly.  
Parker's Essence of Ginger.  
Marshall's Moth Destroyer.  
" Sea Bath Salt.  
Etc., etc., etc.

**MANUFACTURERS**  
OF

Sal Prunella Cubes and Balls.  
Flavouring Essences.  
Menthols.  
Puffs, Sachets.  
Cachous.  
Pharmaceutical Preparations.  
Etc., etc., etc.

— **AGENTS** —  
FOR

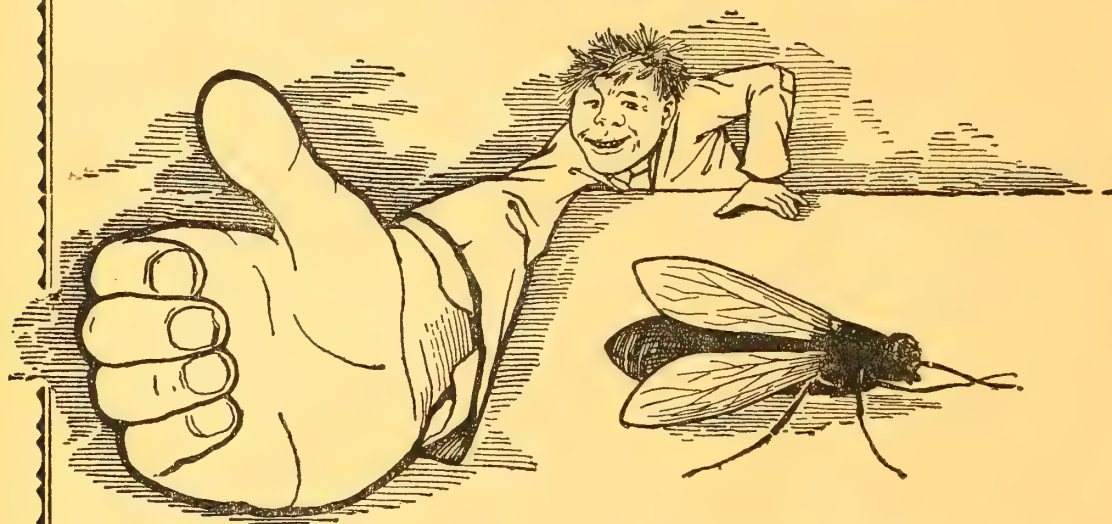
Louis Chapuis' French Perfumery, etc.  
The Stirling Tablet Machine.  
" " Graduates.  
Combs, Brushes, Ribbons,  
Artificial Flowers,  
Etc., etc., etc.

Note Address—27, RED LION SQUARE, LONDON, W.C.




# MARSHALLS' "REEL"

$\frac{1}{8}$  Actual Size.



## FLY CATCHER.

The Best in the Market !

 Sells at Sight !!

**HALF PROFIT - 6/- Per Gross Carriage Paid.**

### "COMET" FLY PAPERS.



4/6 per gross.

### Marshalls' Fly

1d., 2d.,



Tube  
Catcher.  
& 6d.

7/- per gross ; 14/- per gross ; 42/- per gross.



## TERMS.

**PRICES** are strictly NET, except when specified. Accounts are rendered Monthly and payable on the 7th. Interest at the rate of 5% will be charged on Overdue Accounts.

**NEW ACCOUNTS.** Cash with order, or satisfactory trade reference.

**PACKING.** The utmost care is taken in the packing of all goods, and we cannot entertain any claim for breakages in transit; claims should be immediately made on carriers.

**CARRIAGE.** We pay carriage on all packed goods and sundries, where delivered by Globe Express, or on Country Orders of £3 and upwards.

**CLAIMS.** No claim can be entertained where not made within 3 days from receipt of goods.

**EXPORT ORDERS.** Special attention is paid to these. All goods are packed and delivered F.O.B.

**BANKERS.** London and County (Holborn Branch).

ALL PREVIOUS LISTS ARE NULL AND VOID.

## INDEX.

	PAGE		PAGE
Brushes ... ..	6, 7	Menthols ... ..	14
Collapsible Tube Preparations ...	3, 4, 5	Moth Killers ... ..	15
Combs... ..	8, 9	Ozone Disinfectant Tablets ...	16
Drugs and Chemicals ... ..	25	Perfumery .. ...	15, 17
Flavouring Essences ... ..	11	Puffs ... ..	18, 19
Fly Reels, Marshalls' ... ..	1	Sachets ... ..	20, 21, 22
Manicure Sets ... ..	13, 14	Sea Salt ... ..	19
		Toilet Articles ... ..	6, 7, 10, 12, 13, 18, 19



NO.		RETAIL	PER DOZ.	PER GROSS
1	<b>BOOT CREAMS</b> (White, Black, Brown) ... ..	6d.	3/3	36/-
2	<b>COLD CREAM</b> (Otto Rose) with Lanoline ... ..	6d.	3/6	39/-
"	" " " " " " " "	1/-	5/9	63/-
3	<b>CRÉME VIOLETTA</b> (ORIGINAL) ... ..	1/-	4/6	48/-
4	<b>CUCUMBER-GLYCERINE JELLY</b> (non-sticky) ... ..	6d.	3/6	39/-
"	" " " " " " " "	1/-	5/9	63/-
5	<b>CHILLIE PASTE</b> ... ..	6d. and 1/-	3/6 and 5/9	39/- & 63/-
6	<b>GLYCERINE &amp; ARNICA</b> ... ..	6d.	3/6	39/-
"	" " " " " " " "	1/-	5/9	63/-
7	<b>GLYCERINE HONEY JELLY</b> (non-sticky) ... ..	6d.	3/6	39/-
"	" " " " " " " "	1/-	5/9	63/-
8	<b>HAMAMELIS CREAM</b> (Witch Hazel) ... ..	6d.	3/6	39/-
"	" " " " " " " "	1/-	5/9	63/-
9	<b>HILL'S CAJUPUT JELLY</b> .. ..	6d.	4/-	45/-
"	" " " " " " " "	1/-	7/-	72/-
10	<b>LANOLINE TOILET CREAM</b> , Special Size ( $\frac{3}{4}$ -oz. Wrapped)	6d.	2/9	30/-
"	" " " " " " (1 $\frac{1}{2}$ -oz. " )	1/-	5/-	56/-
11	" " " " " " (1-oz. Enamelled Tube)	6d.	3/6	39/-
"	" " " " " " (2-oz. " )	1/-	5/9	63/-
11A	<b>LANOLINE &amp; CUCUMBER CREAM</b> ( $\frac{3}{4}$ -oz. Wrapped)	6d.	2/9	30/-
"	" " " " " " (1 $\frac{1}{2}$ -oz. " )	1/-	5/-	56/-
"	" " " " " " ,(1-oz. Enamelled Tube)	6d.	3/6	39/-
"	" " " " " " ,(2-oz. " )	1/-	5/9	63/-
12	<b>LAVENDER JELLY</b> (for the hands, etc.) ... ..	6d.	3/6	39/-
"	" " " " " " " "	1/-	5/9	63/-
13	<b>LIP SALVE</b> (Rose, Cherry) ... ..	6d.	3/-	33/-
14	<b>POMADE HONGROISE</b> (all shades) ... ..	6d.	2/6	27/-
15	<b>SHAVING CREAM</b> (White Rose) ... ..	6d.	} 3/6	39/-
16	" " (Ambrosial) and Almond ... ..	6d.		
17	<b>SAVONA CREAM</b> (for Cleaning Gloves, etc.) ... ..	6d.	3/6	39/-
18	<b>MEDICAL SOAPS—Thymo Formalin</b> , Plain Tubes	} 6d.	3/6	39/-
19	<b>Carbolic 20%</b> " " " "			
20	<b>TOILET CREAM</b> with <b>LANOLINE</b> (B. W. & Co.) ... ..	6d.	3/6	39/-
"	" " " " " " " "	1/-	5/9	63/-
21	<b>TOOTH PASTE.</b> ARECA NUT ... ..	} 3d.	2/-	21/-
22	" " ANTISEPTIC ... ..			
23	" " CAMPHOR ... ..			
24	" " CARBOLIC ... ..			
25	" " CHERRY ... ..			
26	" " EUCALYPTUS ... ..			
27	" " ROSE ... ..			
28	" " WHITE ROSE ... ..	1/-	5/9	63/-
29	<b>VASELINE</b> (White) Cheeseborough ... ..	6d. and 1/-	3/6 and 5/9	36/- & 63/-
30	" (Golden) " ... ..	6d. and 1/-	2/9 and 4/9	30/- & 51/-
31	<b>WITCH HAZEL CREAM</b> ... ..	6d.	2/9	30/-
"	" " " " " " " "	1/-	5/-	56/-
32	<b>WOOL FAT CREAM</b> ... ..	6d.	3/6	39/-
"	" " " " " " " "	1/-	5/9	63/-
33	<b>WOOL-OLINE Toilet Cream</b> .. ..	6d.	3/6	39/-
"	" " " " " " " "	1/-	5/9	63/-





No.  
2

One-third actual 6d. size



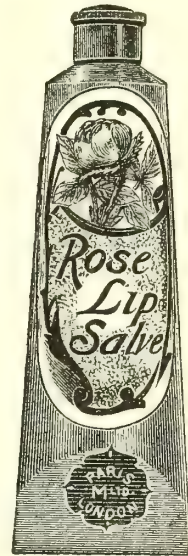
No.  
3

One-third actual 6d. size



No.  
7

One-third actual 6d. size



No.  
13

Actual 6d. size.

**This form of Packing Creams, Jellies, Tooth Paste, &c., is rapidly superseding the old-fashioned Pots and Jars.**

**Our Preparations are GUARANTEED to be carefully prepared from the purest quality of ingredients only.**

**For quality and style of get up they are unequalled.**



No.  
14

Actual 6d. size



No.  
16

One-sixth actual 6d. size



No.  
15

One-sixth actual 6d. size



No.  
12

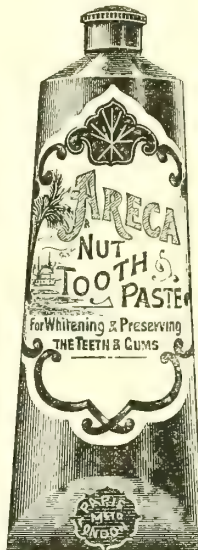
One-third actual 6d. size





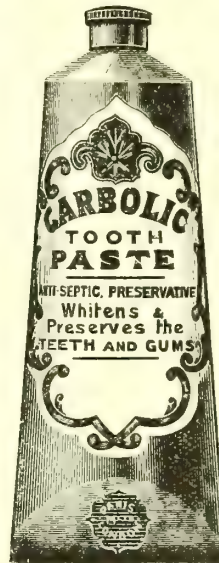
No.  
20

One-third actual 6d. size



No.  
21

One-third actual 6d. size



No.  
24

One-third actual 6d. size



No.  
33

One-third actual 6d. size

OWN NAME ❧

and Address printed  
FREE on Orders of  
3 dozen of each kind.

MOST ARTISTIC  
*LABELS*

PRINTED IN GOLD AND  
COLORS.

*Each a work of art.*

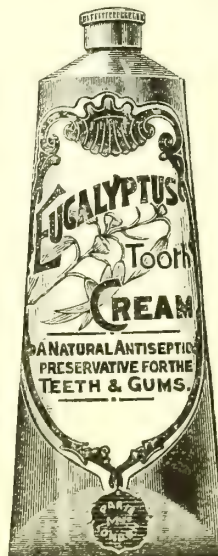
SEND ❧ ❧

Small Order for as-  
sorted Tubes. Once  
shown they sell at  
sight.



No.  
25

One-third actual 6d. size



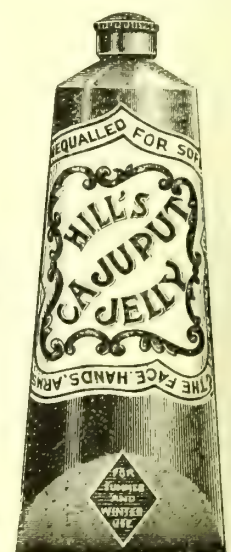
No.  
26

One-third actual 6d. size



No.  
23

One-third actual 6d. size



No.  
9

One-third actual 6d. size



# ILLUSTRATED PRICE LIST

— OF —

PACKED DRUGS, PERFUMERY,

& DRUGGISTS' SUNDRIES.

For QUALITY, STYLE, and PRICE, they Bear Comparison with any other house.

No.

34

## AMMONIA (TOILET LAVENDER).

IN HANDSOME LITHO WRAPPER.



½lb. Bottle, Retail 6d.,

3/6 per dozen.

1lb. Bottle, Retail 1/-,

6/- per dozen.

Name and Address printed

FREE of Charge, on

3 dozen upwards.



## LIQ. AMMON. FORT (880)

W.Qt. 4d. per lb.

6 W.Qt. 3½d. per lb.

35

## ALMOND CREAM. (For Shaving.)

Plain ... 1/3 per lb.  
Scented ... 1/6 "

36

## BAY RUM (DISTILLED AMERICAN)

WITH CROWN SPRINKLER.

### BEST QUALITY.

3 oz. panelled ... 7/- per dozen

### SECOND QUALITY.

3 oz. size ... 4/- per dozen

6 oz. ,, ... 7/- "



No.

37

## BRILLIANTINE.

SEPARABLE &

NON-SEPARABLE.

WITH OR WITHOUT SPRINKLER.



6d. ... 3/6 per dozen

1/- ... 7/- "

6d. ... 36/- per gross

1/- ... 72/- "

38

## BENZINE (PURE).

6d. size ... 3/- per dozen

1/- ,, ... 5/- "

Name and Address on 3 dozen.

39

## BLAUD'S PILLS (COATED).

1 GROSS IN SCREW CAPPED BOTTLE.

NO NAME LABEL FOR RETAIL.

3 dozen at 3/6 dozen; 6 dozen at 3/3 dozen;

12 dozen at 3/- dozen.

40

## BRUSHES, SHAVING.

Sixpenny, bristle, metal, 1 dozen in glass top  
box, as Fig. 1 ... 3/3 per case



Fig. 1.



No.

41

**BRUSHES, SHAVING.**

$\frac{1}{2}$  dozen in glass top box, to retail at 1/- each,  
as Fig. 2 ... 4/3 per case

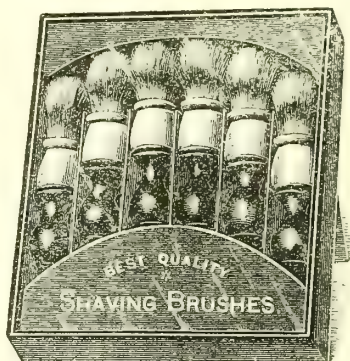


Fig. 2.

42

**BRUSHES, SHAVING.**

BARBER'S SALOON BRUSH, metal and hog  
bristles ... 14/- per dozen

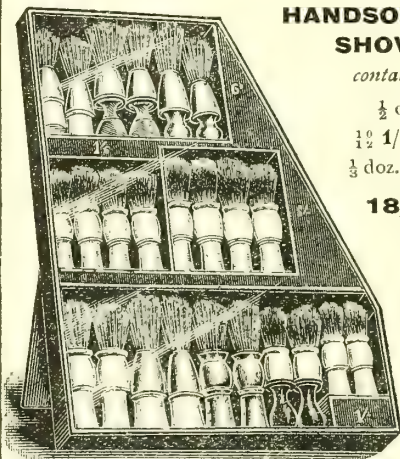
**HANDSOME  
SHOW CASE**

containing:

$\frac{1}{2}$  doz. 6d.;  
 $\frac{1}{2}$  doz. 1/-;  $\frac{1}{3}$  doz. 1/6  
 $\frac{1}{3}$  doz. 2/- as Fig. 3

18/- each.

*A splendid  
line for  
Chemists  
wishing to  
stock a  
good  
assortment.*  
Fig. 3.



43

**BRUSHES, SHAVING.****BADGER.****Bone Hat Shape—**

1/- size, 8/6 dozen; 1/6 size, 12/6 dozen;  
2/6 size, 18/6 dozen.

Ditto, all metal and bristle, 1/- size, 8/6 dozen.

*SPLENDID VALUE.*

44

**BRUSH & BOWL IN FANCY CASE.**

Best Nickel and hog's  
bristle, to retail 1/6,  
8/- per dozen

**A GOOD  
SELLING LINE.**

Fig. 4.

No.

45

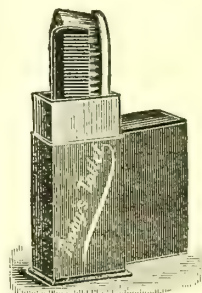
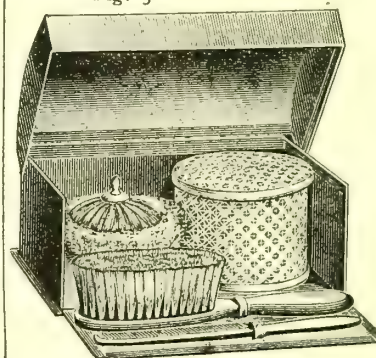
**BABY'S TOILET BRUSH  
& COMB (as Fig. 5).**

Fig. 5

In Handsome Case,  
with Superior Finish,  
to retail 1/6,  
9/- per dozen.

*Also Larger Sizes with*

46



**Powder  
Box,  
Puff,  
Comb,  
Brush,**  
(as Fig. 6)

24/- per dozen

Fig. 6.

47

**BRUSHES, TOOTH.**

Handsome Show Case, containing 1 doz. 4d.;  
1 doz. 6d.; 1 doz. 1/-, as Fig. 5 ... 13/- per case

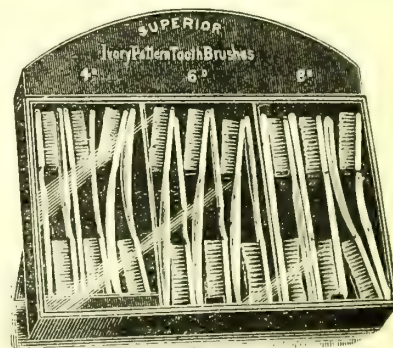


Fig. 5.

48

**BRUSHES, TOOTH.**

Gothic Case, containing 1 dozen Superior  
Brushes ... 3/9 each  
Ditto, LOOSE ... 36/- gross  
" " ... 30/- "  
" " ... 24/- "

49

Best English hand-made, superior finish, from  
3/-, 4/-, 4/6, 5/6, 6/6, 7/- per dozen.

50

BADGER (Ladies') ... 8/8 per doz.

51

" (Gents') ... 9/- "

52

GOAT'S HAIR ... 7/- "

53

TOM THUMB (Children's) ... 2/6 "

*Name stamped free on 1 gross assorted.*



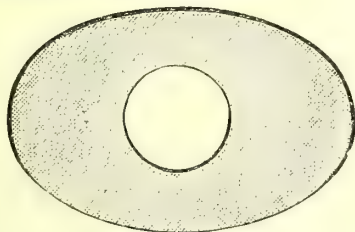
No.  
54

# BRUSHES, HAIR, NAIL, &c.

Kept in Stock, or obtained on the shortest notice.

55

# BUNION PLASTERS.



BUNION PLASTERS (BEST) Square, Round, Oval.

White Felt, assorted, Thin	...	3/-	per gross
" " " Thick	...	4/-	"
Thin, 6d. boxes	...	1/10	per dozen
Thick, 6d. boxes	...	2/3	"
Thin, 1/- boxes	...	4/-	"
Thick, 1/- boxes	...	5/6	"

ARNICATED, same prices as above.

56

# BUNION PLASTERS (O QUALITY)—

Thin	...	2/6	per gross
Thick	...	3/6	"
6d. Thin	...	1/9	per dozen
6d. Thick	...	2/3	"

57

# BLOOM OF ROSES.

(For imparting a ruby colour to the lips.)

PERFECTLY HARMLESS.

6d. bottles (capped leather, neat bots.)	...	2/6	
1/- " " "	...	3/6	
1lb. or 2lb., bottles free	...	per lb.	2/-

58

# CAMPOR ICE CREAM.

In handsome tin boxes, packed in outers 3 doz.

1d. size	...	7/-	per gross
2d. " "	...	13/-	"



No.

59

# CAMPOR BALL. Push up Boxes.

1d. boxes	...	5/6	per gross
2d. " "	...	10/-	"
6d. " "	...	3/-	per dozen

60

# CASTOR OIL (TASTELESS).

1d. = 1/2 oz. packed in boxes of 3 doz.	7/-	gross
2d. = 1 oz. " " "	12/-	"
3d. = 2 oz. " " "	24/-	"
6d. = 4 oz. " " "	36/-	"
In bulk (bottle free)	...	8d. per lb.

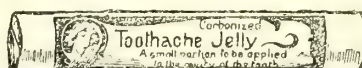
Ditto in Bulk.

61

# CARBOLIZED TOOTHACHE JELLY.

A Splendid Selling Line, 6d.

In Tube, as illustrated, neatly wrapped, 3 dozen on illustrated card, 2/- dozen; 21/- gross.



62

# CHEMICAL FOOD.

1/2 lb. bottles	...	3/6	per dozen
1 lb. " "	...	5/6	"
1 lb. " "	...	8/-	"

63

# CHEST PROTECTORS.

The Improved Stockinette in Scarlet or Natural Grey.

No.	0	1	2	3	4	5	6
Single	6/2	7/10	9/7	11/9	13/9	20/3	23/7 dozen
Double	12/6	16/-	23/-	30/6	37/-	45/6	53/- "

64

# CHEST PROTECTORS.

THE NEW "HEALTH" (WASHABLE).

Made from the natural wools, and being warm, and yet open and porous, are more healthy than the old-fashioned Felt and Chamois.

No.	0	1	2	3	4	5	6
Single	6/-	7/9	8/9	10/6	11/6	12/9	16/- dozen
Double	10/-	12/-	13/3	18/6	21/9	24/9	29/9 "

65

# CHILLIE PASTE.

In Screw Capped Bottles (neatly labelled).

6d. size	...	3/6	dozen	...	39/-	gross
1/- " "	...	6/-	"	...	60/-	"

Customers' Own Name on 3 Dozen orders.

ALSO SEE TUBES, PAGE 3.

66

# COMBS, DRESSING.

HAND-MADE ENGLISH.

HORN, Buffalo, clear of white.

Packed in Priced Boxes of 1/2 dozen each, 1 comb showing on a lid.

Retail 6d.	...	3/9	per dozen
" 9d.	...	5/6	"
" 1/-	...	7/6	"

67

Ditto, in handsome Show Cases of 1/2 dozen each 6d., 9d., and 1/-, assorted as per illustration (Fig. 12, page 9) 7/6 per case



No.



Fig. 12.

*An Ornament to Window or Counter.*

68

**COMBS, DRESSING. VULCANITE.**

UNBREAKABLE (WARRANTED).

No. 271N, in 1 dozen boxes	7in.	4/6	per doz.
„ 280 „ „	7in.	4/-	„
„ 311 The New Reform	7in.	6/6	„
„ „ „	7 1/2 in.	7/-	„

69

**COMBS, METAL DRESSING.**

Half-dozen on card	7in.	3/-	per dozen
„ „	6in.	2/6	„

**Special Line** 8in. 2/- dozen 21/- gross

70

**COMBS, METAL DOG.**

Very strong and durable, for keeping Poodles  
and Pet Dogs' Coats in trim, 1/2 dozen on  
Card ... 7/- per dozen

71

**COMBS, POCKET.**

One dozen in Handsome Stand, each in Leather  
Case as illustration ... 4/-

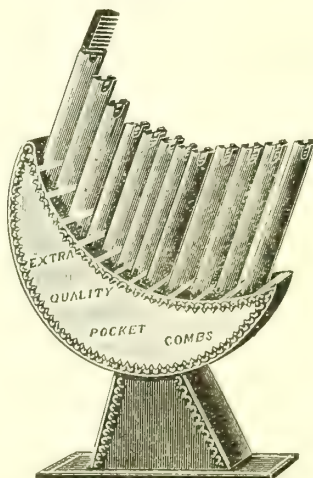


Fig. 13.

No.

72

**COMBS (DUST) SMALL TOOTH.**

Best Horn (1 dozen in Handsome Glass Top  
Box) Gothic (as Fig. 14) 3/3 per dozen

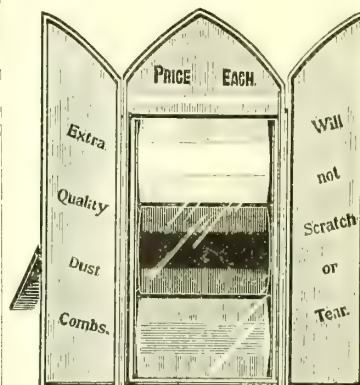
*For Counter or Window Show.*

Fig. 14.

White Horn, Fluted (fine cut) 3 3/4 in. 6/9 per doz.  
VULCANITE, Boxed (fine cut) 3in. 1/6 „

73

**CORN PAINT. The Monster 4d.**

1 dozen on card; with brush ... 2/3 per dozen  
„ „ „ „ ... 21/- per gross

74

**CORN PLASTERS.**

THE "WALK EASY."

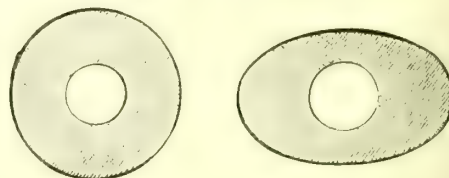
3 dozen 1d. Packets on card ... 5/- per gross  
„ 3d. „ ... 1/3 per doz.  
„ 6d. „ ... 2/6 „

*A Splendid Selling Line.*

75

**CORN SHIELDS.**

White Felt, Round or Oval.



In 1/2 and 1 gross boxes.

Thin ... 1/3 per gross

Thick ... 1/9 „

In 6d. boxes, Thin ... 1/6 per dozen

Thick ... 2/- „

*ARNICATED, same price as above.*



No.

76

**COTTON WOOL.**

White Absorbent A	...	9d. per lb.
" " B	...	1/- "
" " C	...	1/1 "
In sheets with tissue paper	...	1/4 "
Ordinary, 9d., 1/-, and 1/1	per lb.	

77

**COURT PLASTER. (Waterproof.)***Superior White, Pink and Black.*

1d. Cases	...	5d. per dozen
2d. "	...	11d. "
3d. " Tricolor	...	1/8 "
6d. "	...	3/- "
1/- "	...	6/- "

78

**CURLING POWDER.****"VICTORINE."**

*A harmless preparation for making a colorless fluid for keeping the hair in curl in damp weather.*

3d. Packets, sufficient for 1/2 pint, 1/6 per dozen  
With Show Card.

79

**CUCUMBER PASTE.**

For making a beautiful creamy inseparable solution at a cost of 1/6 for 40 ozs.

Sold in Jars, 1/2 lb. 1/6; 1 lb. 3/-.

80

**CUCUMBER & GLYCERINE.**

INSEPARABLE, packed in elegant style, with superior Labels, Ribbons, etc.



2 oz. White Opal Mexican Flat,

3/- per doz.

4 oz. ditto ditto ... 5/6 "

2 oz. Clear Glass panelled flat, 2/6 doz.

3 oz. " " " 3/6 "

4 oz. " " " 4/6 "

6 oz. " " " 6/6 "

2 oz. size, in Elegant Carton Cases,

8/3 doz.

4 oz. ditto ditto 5/9 "

**Customers' own Name and Address printed FREE on orders of 3 dozen and above.**

**DISINFECTANT TABLETS****See NAPHTHALINE.**

81

**DIGESTIVE SYRUP (AMERICAN).***For Liver, Flatulence, &c.*

6d. bottles	...	3/6 per dozen
1/- "	...	7/- "

82

**EAR-ACHE DROPS.**

3d. 2 dozen on a card ... 2/- per dozen

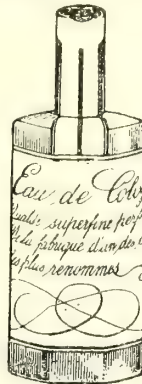
No.

83

**EAU DENTIFRICE.**

6d. samples	...	3/6 per dozen
1/- "	...	7/- "

84

**EAU DE COLOGNE. (Superior)**

In miniature bottle,

Retail at 2d., 3 doz. on card,

16/- per gross.

6d. 1 oz. ... 4/- per doz.

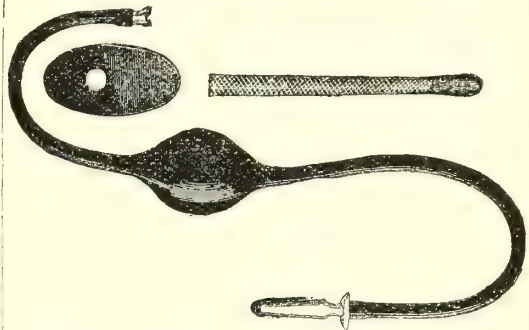
1/- 2 oz. ... 7/- "

2/- 4 oz. ... 11/6 "

Wicker 3/6 ... 18/- "

" 6/6 ... 33/- "

85

**ENEMAS. Superior Rubber.**

No. 1, complete in oval or square box, with Shield and Vagina Tube (black, green or red) 20/- doz.

No. 2, Superior Rubber (3 colors) in hinged oval box, complete ... 30/- doz.

Higginson Pattern (3 colors) in cedar box, complete ... 25/- doz.

86

**EXTRAIT.****CONCENTRATED AUX FLEURS.***Imported Direct from GRASSE.*

TRIPLE	...	8/- per lb.
QUADRUPLE	...	10/6 "

In original Tins containing about 7lb.

6d. per lb. less

87

**EYE SHADES, SILK.****EXTRA QUALITY AND FINISH.**

*Green, Black, or Green and Black, in boxes of 1 dozen.*

SINGLE	Small	...	2/- per dozen
	Medium	...	2/6 "
	Large	...	3/- "
DOUBLE	Small	...	4/6 "
	Large	...	5/- "
Ditto, in Flesh-colored CELLULOID, for right or left		...	1/9 per dozen



No.  
88**FINGER STALLS.**

Fig. 1.

BEST SILK (Black), 1 dozen in box, 3/6

*Woven in Natural Grey or Black.**Gives Perfect Ventilation.**SEAMLESS, WOVEN  
IN ONE PIECE.**Require no tying.*

On cards of 1 dozen, as

Fig. 1 3/6 doz.

CHAMOIS LEATHER,  
Assorted,  
Best Quality, to tie on.  
1 dozen in glass top box  
containing also  
thumb stalls, 3/6

Ditto, on card, 3/3

89

**FLAVOURING ESSENCES.***Superior quality for culinary purposes**Packed in flat, ovals, or cannons.*

ALMONDS.

LEMON.

VANILLA.

RATAFIA.

PINEAPPLE.

PEPPERMINT.

CLOVES.

COCHINEAL.

1/2 oz. 2/- doz. 1 oz. 3/6 doz.

*Customer's own Name printed  
FREE on 6 doz.*

90

**FLAVOURING ESSENCES.**

1d. Sample Bottles.

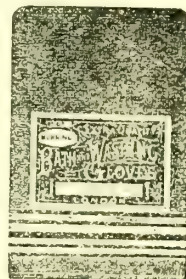
Wonderful Value.



3 dozen on Card, assorted ... 8/- per gross

**SPECIAL QUOTATIONS FOR QUANTITIES.**No.  
91**FLESH GLOVES.**

WHITE TURCO, No. 1	1/9 per doz. pairs
" " " 2	2/6 " "
" " " 3	3/- " "
" " Bound 4	4/- " "
" " " 6	3/9 " "
" " No. xx	4/9 " "

*Superior assorted designs and materials.*

The Goodwood (mixed rough),	2/3 per doz. prs.
" " No. 2	3/3 " "
" " extra soft, No. 90...	2/9 " "
" " " 82...	2/9 " "
Best Naiad (striped)	6/- " "
" Liberty	6/- " "
" Cardinal	6/- " "
" Rough (Bath)	4/- " "

WHITE TURKO AND LOOFAH GLOVE.

No. 1	3/6 per doz. gloves
" 2	4/6 " "

THE NEW FLANNEL AND LOOFAH GLOVE.  
A splendid line ... 2/9 per doz. gloves*A Large Assortment of***FLESH PADS, STRAPS & PADS,***Kept in Stock.*

93

**FLY CATCHER.***"THE REEL," Marshalls' (see Page 1).***FLY PAPERS, STICKY.***Printed on Superior Paper, with non-drying  
Honey Gum.*

94

**THE COMET.**

Packed in 1 gross boxes ... 4/6

*Customer's own Name printed on 10 gross lots.*

95

**FEEDING CUPS, INVALIDS'.***Best China, Superior Finish.***NEW DESIGNS**In Plain White, Blue, White and Gold, Fancy  
and Floral, from  
4/-, 4/6, 5/-, 6/-, 6/6, 9/- per dozen



No.

96

**FOOT POWDER, ANTISEPTIC.**

2d. boxes	...	...	1/3 per dozen
3d. "	...	...	2/- "
6d. "	...	...	3/- "

97

**FULLER'S EARTH.**

1d. boxes (3 doz. in box) ..	...	4/- per gro.
2d. fancy enamelled tin boxes (1/2 lb.)	8/6	"
3d. "	(1/2 lb.)	16/- "
6d. wood barrel, as illustrn. (1/2 lb.)	2/6	per doz.
1/- "	(1/2 lb.)	3/6 "



THIS IS AN  
EXCEPTIONALLY SMART LINE.  
HANDSOME LABEL  
IN GOLD AND COLORS.

OWN NAME AND ADDRESS  
PRINTED FREE ON 6 DOZ.  
LOTS.

98

**FURNITURE CREAM.**

"MIRRO," in Collapsible Tubes.

*Clean to Use, Economical, and a Brilliant  
Polisher.*

Large Size Tubes	...	4/- per dozen
Ditto, in Bottle, neatly labelled	3/6	"

99

**GLYCERINE. (Guaranteed Pure.)**

1d. bottles, 3 dozen boxes	...	8/- per gross
2d. "	2	" 16/- "
6d. "	1	" 3/6 per doz.
1/- "	1	" 7/- "

100

**GLYCERINE & ROSE WATER.**

2d. bottles	...	14/- per gross
4d. "	...	2/- per dozen
6d. "	...	3/6 "
1/- "	...	6/6 "

101

**GLYCERINE & HONEY JELLY.**

6d. bottles	...	3/- per dozen
6d. tubes, carded	...	3/6 per dozen

102

**GOLD BEATER SKIN. Best Quality.**

Wrappers, retail	1d.	3d.	6d.
" per dozen	3 1/2d.	10d.	2/-
Cases,	5d.	1/8	3/-

103

**GREGORY POWDER.**

1d. boxes	...	7/- per gross
6d. bottles	...	3/- per dozen

No.

104

**GRYPE MIXTURE for Children.**

3d. bottles	...	2/- per dozen
6d. "	...	3/6 "

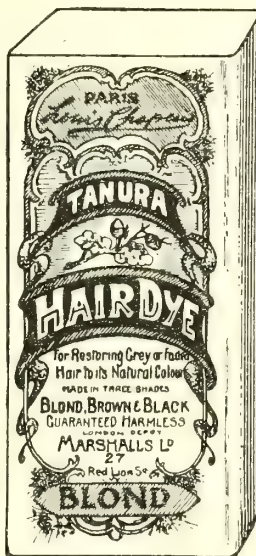
105

**HAIR DYE (One Solution).**

"TANURA" (*Chapuis, Paris*).

*An Elegant Preparation for producing Black,  
Brown or Blonde Tints to Faded Hair.*

**GUARANTEED.**



Packed in  
Elegant Carton,  
with  
Full Directions for Use.  
2/- size ... 14/- doz.

**IT PAYS TO  
PUSH,**

**Shows Hand-  
some Profits,  
and Gives  
Satisfaction.**

106

**HAIR POMADE.**

1d. decorated tins	...	7/- per gross
6d. bottles	...	3/6 per dozen
1d. "	(Mother's Friend)	7/6 per gross

108

**HAIR RESTORER.**

6d. bottles	...	3/6 per dozen
1/- "	...	7/- "

109

**HAIR SHAMPOO POWDER.**

1d. envelopes	...	6/- per gross
2d. "	...	12/- "

110

**HEADACHE POWDERS.**

1d. envelopes, 3 dozen on card	...	8/- per gross
--------------------------------	-----	---------------

111

**HOUSEHOLD AMMONIA, CLOUDY**

6d. bottles	...	3/6 per dozen
1/- "	see illustration, page 6	6/- "

112

**INDIGESTION POWDERS.**

1d. envelopes	...	8/- per gross
---------------	-----	---------------

113

**INDIARUBBER TUBING**

*FOR FEEDING BOTTLES.*

Black, superior	...	8/- per lb.	4d. per yard
" No. 1 quality	7/-	"	3 1/2d. "



No.

114

**INDIARUBBER SHEETING.***APRONS, CUSHIONS, &c., obtained to order.*

115

**INDIARUBBER TEATS.***Seamless Best Quality Pure Rubber.*

No. 3



No. 2



No. 1.

Blind, 1 hole, 1 leech bite or 5 leech bite, in Boxes of 1 dozen.

BLACK SEAMLESS, stout, full size, as illustration

No. 1	No. 2	No. 3
6/-	8/-	11/-
Extra stout 7/-	9/-	14/-
STRAIGHT (No. 5) stout	15/-	17/-
extra stout	17/-	

BULB TEATS, seamless black,

No. 1	No. 2	No. 3
10/-	12/-	18/-

116

**INSECT POWDER.**

1d. boxes	...	6/6	per gross
3d. "	...	18/-	"
6d. "	...	2/6	per dozen
	...	24/-	"

117

**IODISED SARSAPARILLA,***FOR THE BLOOD.*

6d. bottles	...	3/6	per dozen
1/- "	...	7/-	"
1/6 "	...	8/-	"

118

**LIME CREAM & GLYCERINE.**

Finest quality, nicely scented.

CLEAR WHITE GLASS, CAPPED.

6d.	...	2/6	dozen	...	27/-	gross
9d.	...	3/6	"	...	39/-	"
1/-	...	5/6	"	...	60/-	"

Customer's own name and address  
printed Free on 1/2 gross lots.

No.

119

**LINT.** 1/1 1/6 1/8 2/3 per lb.

120

**LIP SALVE.**

In Enamelled Collapsible Tube, as Fig. 13, page 4.

CHERRY LIP SALVE	...	3/-	per dozen
ROSE " "	...	3/-	"

121

**LITTLE LIVER PILLS.**

40 Pearl-coated Pills, in Tube, neatly wrapped,  
(no name) ... 3/6 per dozen

122

**LIQUORICE POWDER,**  
**"COMPOUND."**

*Prepared according to Pruss. Ph.*

1d. boxes	2-oz.	4-oz.	8-oz.	16-oz. bottles
8d.	2/3	3/3	5/9	10/- per doz.

**MANICURE SETS.**

SUPERIOR QUALITY FITTINGS.

BEST AND CHEAPEST IN LONDON.

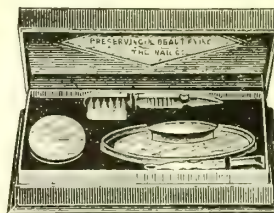


Fig. 1.

1/- Fitted with  
Brush,  
File,  
Tweezers,  
Polisher,  
and  
Box of Powder  
8/- per dozen

123

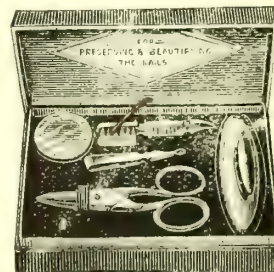


Fig. 2.

2/6 Fitted with  
Brush,  
File,  
Tweezers,  
Polisher,  
Scissors,  
and  
Box of Powder  
14/- per dozen  
& 18/- "

124

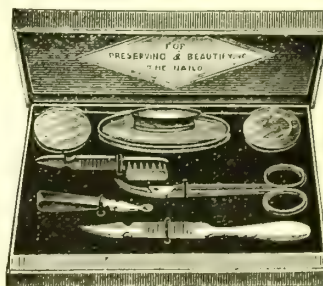


Fig. 3.

125

3/6 Fitted with  
Superior  
Brush,  
File,  
Tweezers,  
Trimmer,  
Polisher,  
Scissors, and  
2 Boxes Powder  
24/- per dozen



No.

**MANICURE SETS, continued.**

SUPERIOR LEATHER COVERED.

Velvet and Silk-lined Cases, fitted with Best Quality Fittings.

126

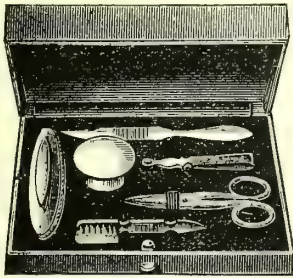


Fig. 4.

4/- Fitted with  
Best Quality  
Brush,  
File,  
Tweezers,  
Trimmer,  
Polariser,  
Scissors,  
and  
Box of Powder  
2/9 each

127

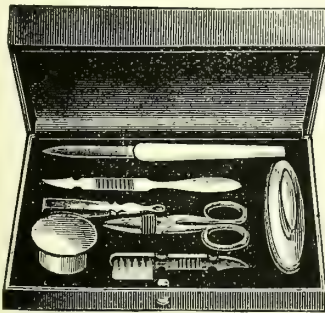


Fig. 5.

7/6 Fitted with  
Brush,  
File,  
Tweezers,  
Trimmer,  
Scissors,  
Knife,  
Polariser,  
and  
Box Powder  
3/6 each

128

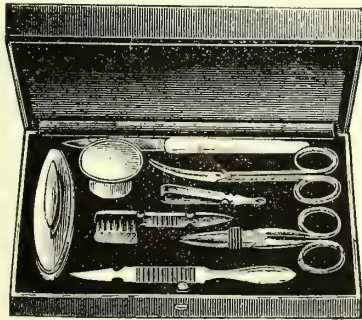


Fig. 6.

10/6 Fitted with Brush, File, Tweezers, Trimmer,  
Scissors (straight), Scissors (curved), Knife,  
Polariser, and Box of Powder ... 4/6 each

129

**MANICURES, POCKET.**

Knife, File, and Trimmer combined, 6d., 1 doz.  
on card ... 3/6

130

1d. and 2d. Nail Trimmer, 1 dozen on card,  
9/- per gross

No.

131

**NAIL POLISH. POWDER.****"Royal Crown" Brand.**

For producing a brilliant and lasting polish  
to the nails.

Retail 1/- each.



3/6 per dozen

A SPLENDID  
SELLING LINE.

132

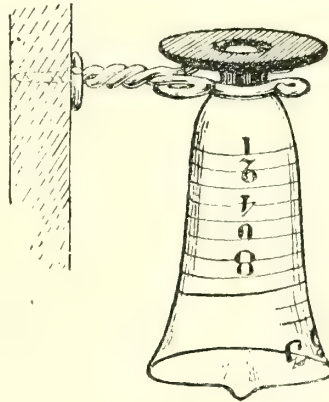
**MEASURES.**

THE "STIRLING" GRADUATE,  
PATENTED.

**NO MORE FOOTLESS MEASURES.**

This new and improved Graduate has filled a  
long-felt want.

The base being made of hard, UNBREAKABLE  
Rubber, into which the glass is screwed,  
completely prevents the frequent breaking,  
therefore they will be found more economi-  
cal than the ordinary glass.



THE  
HANDSOMEST  
GRADUATE  
ON THE  
MARKET.

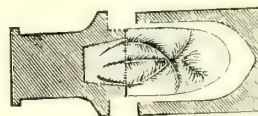
4 10 20 ounce  
(Verified) 18/- 30/- 40/- per dozen

133

**MENTHOLS.****THE "REEL" BRAND.**

1d. size in Wood Cases, 3 doz. on card 6/- gross  
2d. " " 2 " " 12/- "  
3d. " " 1 doz. in box 18/- "  
6d. " " 3/- dozen  
Large Cones.

134



(VINT'S PATENT.)

3d. White Wood, carded ... 2/- per dozen  
6d. Acorn, Bottle or Flat Shape 3/6 "  
1/- " " 6/6 "

No.  
135**MOTH DESTROYER.** (*Marshall's*.)

6d. each in box ... 1/9 per dozen

NAME PRINTED ON 6 DOZEN FREE.

136

**MOTH DESTROYER, "ORIENT."**In Boxes containing 15 balls as illustration,  
2/- per dozen; 21/- per gross.OWN NAME AND ADDRESS PRINTED FREE  
ON 6 DOZEN.

137

**NAPHTHALINE PREPARATIONS.**

See Opposite Page.

143

**OATMEAL.** (*VIOLET-SCENTED.*)

Packed in Wood Barrels.

Elegant Label in Gold and Colours.



6d. 1/2-lb. size ... 3/- dozen

1/- 1/2-lb. ,, ... 5/6 ,,

ALMOND OATMEAL SAME PRICES.

No Name Labels.

Own Name and Address printed  
FREE on Orders of 3 dozen.

SELLS LIKE RIPE CHERRIES!

144

**PARAFFIN.** (*TOILET.*)

For the Hair.

GUARANTEED NON-INFLAMMABLE.  
(Odourless.)

Neatly put up with artistic label.

3 oz. size ... 4/- per dozen

6 oz. ,, ... 7/- ,,

Own Name and Address printed  
FREE on 3 dozen lots.

145

**PEROXIDE OF HYDROGEN GOLDEN HAIR WASH.**3d. bottles ... 2/- per dozen  
6d. ,, ... 3/6 ,,

No.

**PERFUMERY.**

146

**TRIPLE ESSENCES** (*Louis Chapuis, Grasse.*)

Imported Direct from Grasse.

Exceptionally Good Quality.

8/- per lb.; original tins 6d. per lb. less.

ESS BOUQUET

HELIOTROPE

JOCKEY CLUB

JASMIN

MAY BLOSSOM

LILAC

LILY OF VALLEY

CHYPRE

OPOPONAX

ROSE

VIOLET

PARMA VIOLET

WALLFLOWER

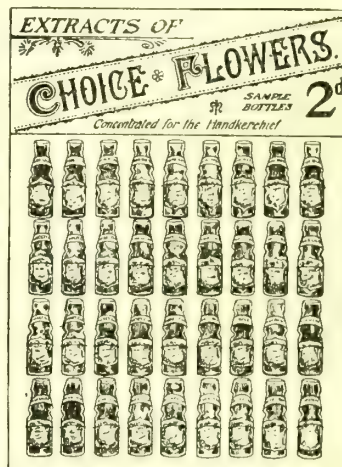
WHITE ROSE

ETC., ETC., ETC.

147

**PERFUMES, ASSORTED.**

1d. Sample bottles, 3 doz. on card ... 8/-



2d. Sample Flats,

3 doz. on card,  
14/- gross2d. Sample  
Miniature  
Lemonade,  
3 doz. on card,  
14/- gross2d. Sample both  
of  
Eau de Cologne,  
Lavender Water,  
Assorted  
Perfumes,  
3 doz. on card,  
14/- gross

148

**3d. ASSORTED PERFUMES.**

CAPPED WITH FLOWERS.

A Splendid Selling Line.

1 dozen in box ... 1/9 per dozen





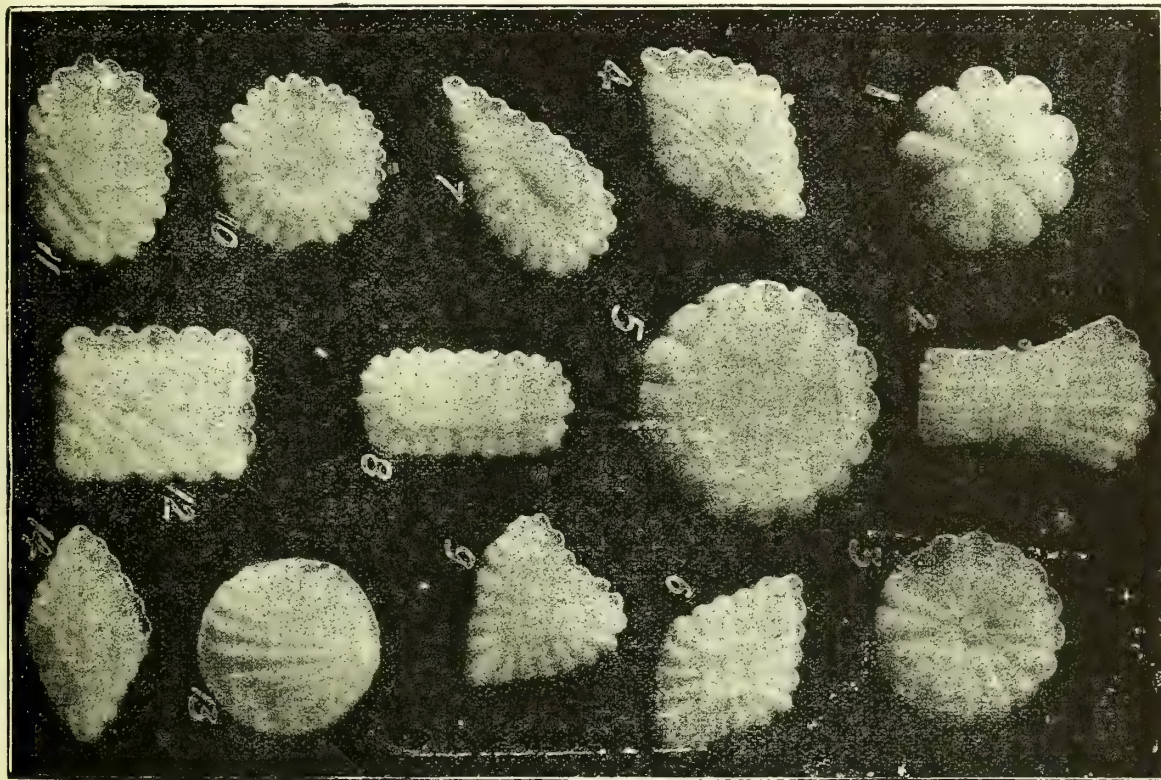
No. NAPHTHALINE PREPARATIONS.

137

OZONE

## Disinfectant Tablet

IN WHITE AND BEAUTIFUL ART SHADES.



QUARTER OF ORIGINAL SIZE.

No.

## DISINFECTANTS.

138

## OZONE TABLETS.

*In assorted artistic shapes and colors,  
each with ring for hanging.*

THE "POPULAR" 1d. line, in boxes of 1 gross  
assorted ... 4/- gross  
(As illustration except No. 5.)

139

All shell shape (No. 13) ... 5/- gross

140

2d. size (No. 5) ... 6/-

141

## ADAMS' NAPHTHAUEUCALYPTINE TABLETS.

Wrapped ... 5/6 gross

No.

## NAPHTHALINE (in Bulk).

142

NAPHTHALINE (crystals), 14lb. packets, 2d. per lb.

„ „ per cwt., bags, 12/-

„ (candle) „ 14/6

„ „ Smaller quantities, 18/- cwt.

„ (balls) 6d. per lb.

*The above Prices are ex Warehouse, and  
sent only carriage forward.*



No.

**PERFUMERY, continued.**  
**ASSORTED PERFUMES.**

149



**6d.** with Crown Sprinkler, ribboned,  
and beautifully labelled, as Fig. 2.

1 dozen ... 3/9 per dozen  
 2 " ... 3/6 "

*Undoubtedly the Best Value in  
the market.*

Fig. 2.

**ASSORTED PERFUMES.**

150

**9d.** Monster Bottle, with Sprinkler; ribboned,  
gold blocked label, 4/6 doz.; 48/- gross

151

1/- Stoppered Lumborg (Fig. 3) ... 8/- per doz.

152

1/- Fleur de Lys (Fig. 4) ... 8/- "

153

1/- Fluted, Cut Stoppered (Fig. 5) 12/- "



Fig. 3



Fig. 4



Fig. 5

154

**PERFUMES** in Handsome Boxes, suitable  
for Presents, containing 1, 2, or 3 bottles,  
from ... 8/- p r dozen

155

**LAVENDER WATER.**

Distilled from the flowers of exquisite  
fragrance.

2d. Samples, 3 doz. on card... 14/- gross  
 6d. Fluted Bottles, as Fig. 3... 3/- dozen

1/- " " " ... 5/- "

6d. 1 oz. Pyramid ... 4/- "

1/- 2 oz. " ... 7/- "

2/- 4 oz. " ... 13/- "

*Handsome Wire Stands for Window  
Show FREE with orders of 3 dozen  
assorted, 6d., 1/-, and 2/-.*

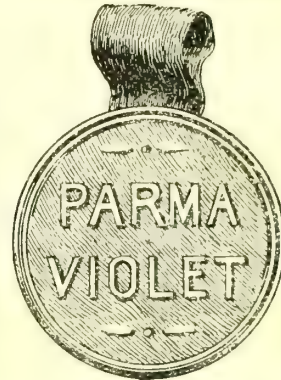


Fig. 3

No.

157

**PERFUMED MEDALLIONS.**



These Medallions  
combine in a portable  
form a delicious  
Cachou or Breath  
Perfumer, & Sachet.

*They are made in the  
following Perfumes:*

**PARMA VIOLET  
RUSSIAN VIOLET  
HELIOTROPE  
FRANGIPANNI  
LILY OF VALLEY  
&C., &C., &C.**

6d. size ... 3/6 dozen ... 36/- gross

On Orders of 3 gross, Customer's own Name and  
Address stamped FREE.

158

**1d. FLORET MEDALLIONS.**

*Assorted Flavours.*

3 dozen on card ... 7/- per gross  
 5 gross lots at ... 6/6 "

159

**POT POURRI JARS.**

*Filled with delicious Pot Pourri.*

Assorted colors and designs, Beautifully ribboned.

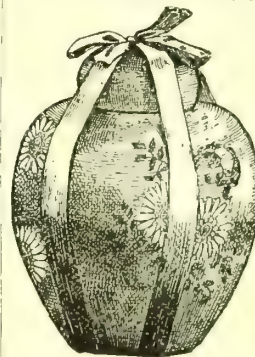


Fig. 1

*A GRAND LINE  
THAT SELLS  
AT SIGHT!*

6/- per dozen.

156



**REAL  
JAPANESE  
WARE.**

*In Blue and White  
China.*

Filled ... 8/- doz.

Ditto, Superior Hand  
Painted, 12/- doz.

160

**PESSARIES. SOLUBLE QUININE.**

In Partitioned Slide Boxes of 1 dozen.

8/- per dozen boxes. 80/- per gross.

161



No.  
162

**PILE OINTMENT.**

*An Efficacious Preparation,  
Prepared with Witch Hazel, &c.*

Neatly packed in 1 oz. Collapsible Tube, cartoned,  
complete with Vulcanite Rectum Tube,



Unstamped ... 7/- doz.  
Stamped ... 8/6 ,,  
Spare Rectum Tubes,  
3/- doz.



Customer's own Name printed FREE on 3 dozen.  
*Also packed in Plain Cartons, without Price or  
the word Homœopathic.*

163

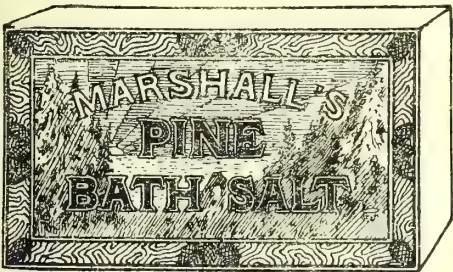
**PILLS, SUGAR AND PEARL COATED.**

Antibilious, Rhubarb, LIVER, &c., &c., at  
lowest prices.

164

**PINE BATH SALT.**

Packed in 1/2 lb. Cartons, as illustration, 1 dozen  
in outer  
1d. Packets ... 8/- per gross



ONLY TO BE SHEWN, TO SELL.

165

**POMMADE HONGROISE.**

MADE IN THREE SHADES—

WHITE. BLACK, AND BROWN.

BOTTLES.

6d. Size ... 3/- per dozen

TUBES, as illustration, page 4.

6d. Size ... 2/6 per dozen

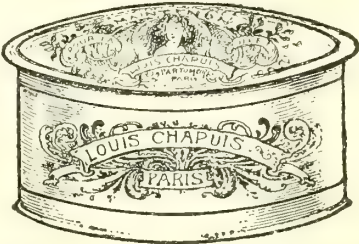
1/- ,, ... 4/6 ,,



No.  
166

**POUDRE VELOUTÉE**  
**de Maintenan.**

PURE RICE FACE POWDER, in 3 Tints,  
White, Cream, Rose.



*This Face Powder is unequalled for Purity,  
it enjoys a large sale amongst Professionals  
and those desiring a pure adhesive powder.*

1 dozen boxes ... 4/6 per dozen  
6 ,, ... 4/3 ,,  
12 ,, ... 3/- ,,

It sells at 1/-, therefore shows you a handsome  
margin, and pays you to push.

167

**PUFFS, TOILET.**

Silk Tops, Bone Handles (splendid value).

No. 1 2 3 4 5 6  
1/9 2/3 3/- 4/3 5/6 7/- per dozen



Being actual Manufacturers, we are enabled to  
offer exceptional advantages.

168

**ELEGANT CRESCENT SHOW CASE**

Containing 1 dozen 6d. Puffs, Silk tops, as  
Fig. 2 ... 3/-

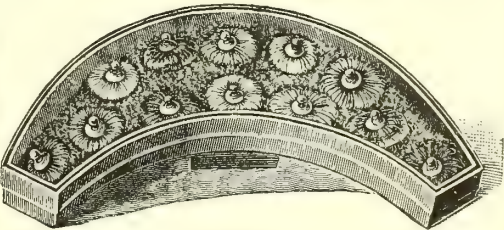


Fig. 2

169

**THE "PARISIENNE" PUFF.**

*Silk Tops, Bone Ring Handles.*

1 dozen in Show Case ... 3/6 dozen

No.  
170**THE "SNOWBALL."**

No. 1, with Handles ... .. 3/6 per dozen  
 No. 2     "     ... .. 5/6     "

171

**PUFFS.**

ELLEN TERRY Silk Pocket, as Fig. 14.

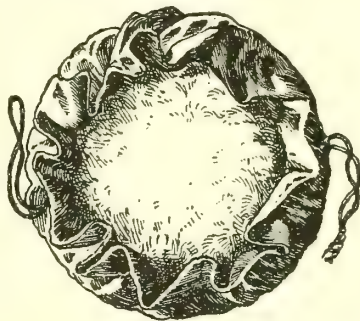


Fig. 14

Assorted  
Colors.

No.	Doz.
00 ...	4/6
0 ...	5/6
1 ...	6/6
2 ...	7/6
3 ...	8/6

172

**PUFFS. CHAMOIS POCKET.**

Face Leather and Puff combined, with Draw  
String, as Fig. 14 ... 6/6 per dozen

173

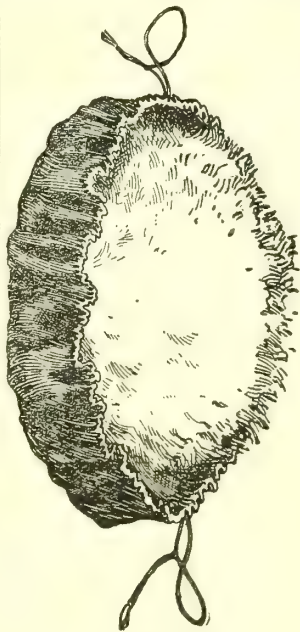
**PUFFS THEATRICAL. POCKET BAG.**

Fig. 15

The largest and best  
in the  
market.

Sateen, in various  
pretty colors,  
as Fig. 15

No. 1 ...	1/9 dozen
" 2 ...	2/3     "
" 3 ...	3/6     "
" 4 ...	5/6     "
" 5 ...	7/6     "

174

**CHAMOIS FACE LEATHERS.**

Assorted Colors.

Oval (Pinked) ... .. 3/- per dozen  
 Square     "     ... .. 2/6     "

175

**SAL PRUNELLA BALLS.**

5d. per lb.     14lb. 4½d.     Cwt. 40/-  
 Ditto (Parv), for Smelling Salts,  
 8d. per lb.     14lb. 7d.     Cwt. 65/-

No.  
176**SALINE. (EFFERVESCING FRUIT.)**

¼lb. Round Tins, lever lids, with elegantly  
designed labels (no name). Buyers can  
have own name on 1 gross and upwards.

2/6 per dozen     ...     27/- per gross

HEALTH SALINE as above.

177

**SEA SALT.**

*A Perfect Sea Bath at  
Home.*

Packed in linen bags,  
1 dozen in box, neatly  
labelled.

½lb. size 1d. 8/- gross  
 1lb. size 2d. 16/-     "

On orders of 5 gross,  
special design can be  
printed with name and  
address

FREE OF CHARGE.



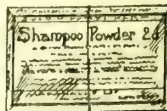
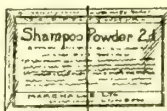
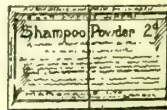
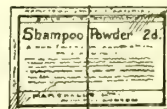
178

**PINE SEA BATH SALT (see Page 18).**

179

**SHAMPOO POWDER. 3 doz. on Card.**

1d. size, 6/- per gross.     2d. size, 12/- per gross.

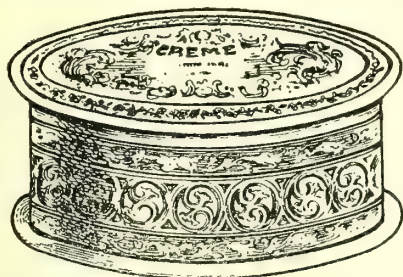


Own name and address printed FREE on orders of 1 gro. 1d., 6 doz. 2d. size.



- No. 180 **SHAMPOO POWDER.**  
ROSEMARY, CAMPHOR, and BORAX.  
1d. Packets ... .. 6/- per gross

- 181 **SHAVING CREAM in Pots.**  
**CREME D'AMANDE**, as Fig. 1.  
SUPERIOR QUALITY.  
6d. size ... 4/- doz. 1/- size ... 7/- doz.



- 182 **SMELLING SALTS.**  
ELEGANTLY PUT UP.  
LAVENDER filled with Balls or Ammonia.
- |                     | Dozen | Gross |
|---------------------|-------|-------|
| 1 oz. Actinic Green | 3/3   | 36/-  |
| 2 oz. „             | 5/6   | 60/-  |
- ALSO  
EAU DE COLOGNE SALTS  
AND  
EUCALYPTUS SALTS  
AT ABOVE PRICES.



Customer's own name and address printed free on 3 doz.

- 183 **COLORED SALTS.**  
Handsome Bottle (Horseshoe Pattern) filled with Balls and Alcoholic Ammonia, beautiful colors, ribboned, retail 1/-  
7/- per dozen. 70/- per gross.

- 184 **ATISHOO SALTS.**  
For  
COLDS IN THE HEAD,  
CATARRH,  
INFLUENZA, &c.  
—  
The Best Line on the Market.  
—  
3/6 per dozen.  
36/- per gross.



- No. **SACHETS**  
IN ENVELOPES.
- 193 **1d. ENVELOPE** (Beautifully Lithographed)  
3 dozen on card .. .. 8/- per gross
- 194 **3 PICTORIAL SACHETS.** Charming Colored Views of well-known places on the Thames, each a work of art, as Fig. 1.  
24/- per gross.



Fig. 1

Assorted Odours, Woodbine, Meadowsweet, &c., &c.

- 195 **6d. ENVELOPES.**  
A very Showy Line, ribboned, 3/- doz. ; 30/- gross  
Own name and address printed FREE on orders of 1 gross 1d., 1/4 gross 6d.

- 196 **THE BUTTON SACHET.**  
Exquisitely Perfumed Silk Buttons, with beautiful Painted Designs. A charming personal ornament. Carded, 1/6 & 2/- per dozen

- 197 **SACHET DE CORSAGE.**  
Made in Rich Colored Satin and Lace, with names of Perfumes stamped in Gold.  
—  
These Sachets are specially made to be worn or sewn in ladies' garments.  
—

Packed in Handsome Show Box, containing 1 dozen assorted	} 4/6	Loose,
		48/- gross.

No.

## SILK SACHETS.

*"A THING OF BEAUTY IS A JOY FOR EVER."*

Made in Beautiful ART SILKS.

They command a Ready Sale all the year round.

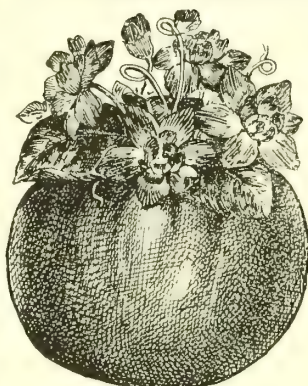
## THE "BUTTERFLY"

AN IDEAL SACHET.

These exquisite Sachets are made in rich Silks and Satins, beautifully coloured to Nature. 40 different kinds, including the well-known species, such as the Red Admiral, Peacock, &amp;c., &amp;c.

	<b>3/6 Dozen.</b>	<b>36/- Gross.</b>
<b>Smaller Size, 2/6</b>	<b>"</b>	<b>24/- "</b>

CUSTOMERS CAN'T RESIST THEM. HANDSOME SHOW CARDS.



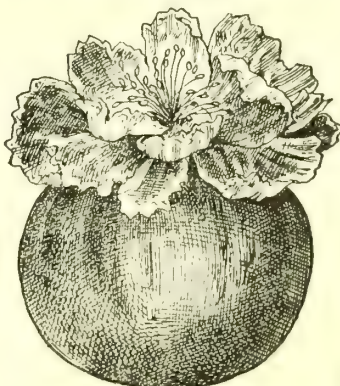
HALF ORIGINAL SIZE

NEAPOLITAN VIOLETS,

4/- dozen. 42/- gross.

## The "POPPYLAND"

SACHET.

MADE WITH THE RICHEST CHINESE  
SILK, BEAUTIFULLY SHADED IN  
30 COLORS.

HALF ORIGINAL SIZE

These Sachets, where shown in  
window, cannot fail to arrest  
attention. Consequently they  
draw customers to you.

SAMPLE DOZEN	<b>4/-</b>	<b>42/-</b>	GROSS.
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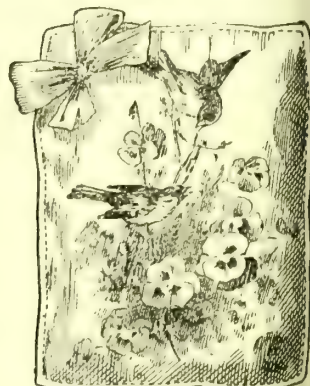
HALF ORIGINAL SIZE

VIOLETS &amp; SNOWDROPS,

4/- dozen. 42/- gross.



HALF ORIGINAL SIZE

THE NEW CUSHION SACHETS,  
Beautifully Painted.

Assorted Designs,

7/- dozen. 80/- gross.

SEND FOR SAMPLE DOZEN.



No.

**SACHETS, continued.**

**THE NEW FAIRYLAND FLORAL SACHET.**

... FRAGRANT & LASTING....



Fig. 7

These Sachets are acknowledged to be the most  
Artistic Sachets ever introduced.

They are made of BEAUTIFUL SHADED CRINKLED SILKS,  
with a NATURAL LOOKING FLOWER representing the  
following Perfumes :

MAY BLOSSOM  
WHITE HEATHER  
HELIOTROPE  
LILAC, PINK & WHITE  
LILY OF VALLEY  
SPEPHANOTIS  
LAVENDER  
ROSE  
VIOLETS  
JASMIN, ETC., ETC.

1 dozen assorted

in Box,

4/6 dozen

48/- gross

THEY DON'T REQUIRE PUSHING.

THEY SELL AT SIGHT.

**A GREAT NOVELTY FOR XMAS...**

**PLUM PUDDING SACHET.**



$\frac{1}{3}$  ORIGINAL SIZE

A PERFECT representation of a Rich Fruity Pudding,  
made in Silk, each mounted on a miniature plate,  
bearing various seasonable greetings,

x x x

THEY LOOK NICE ENOUGH TO EAT.

x x x

5/- Dozen. 54/- Gross.

A NOVEL FORM OF XMAS CARD.

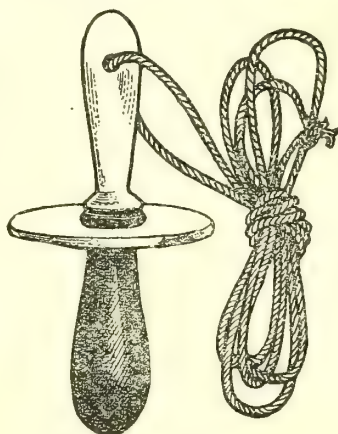
**SACHET POWDERS IN BULK.**

Being Large Users, we are enabled to offer our friends  
exceptionally Low Prices ... from 3/- to 8/- per lb.

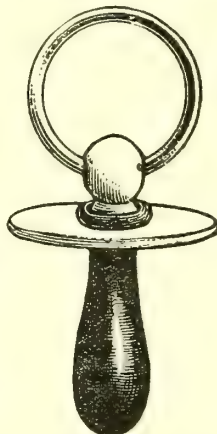
No.

**TEATS, SOOTHING.****THE "PET" BABY SOOTHERS.***All fitted with best bone mounts, and best quality English made seamless rubber teats, black.*

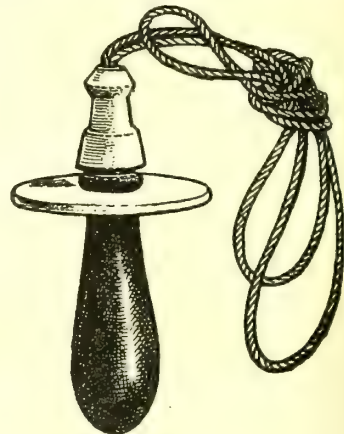
198



No. 1



No. 2



No. 3

**THE BEST 1d. SOOTHERS ON THE MARKET.**

1d. }	No. 1.	3 dozen on attractive cards	...	...	...	...	...	8/-	per gross
	" 2.	" " " " with bone ring mount	...	...	...	...	...	8/-	"
	" 3.	" " " " with wood union corded	...	...	...	...	...	7/-	"
2d.		Bone ring and shield, large seamless teat, 1 dozen on card	...	...	...	...	...	14/-	"
3d.		" " " " " " " " " "	...	...	...	...	...	20/-	"
6d.		Superior extra large seamless teat, assorted patterns, 1 dozen on card	...	...	...	...	...	33/-	"

199

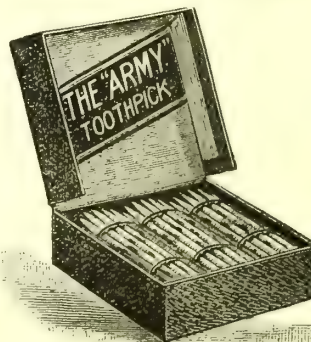
**TEETHING RINGS.**

Bone, 1d. size, loose	...	...	...	...	...	...	...	6/9	"
" 1d. " 1 dozen on card	...	...	...	...	...	...	...	7/9	"
" 2d. " " " "	...	...	...	...	...	...	...	12/-	"

200

**TOILET VINEGAR.***Packed in Glass Plug Stoppered  
Bottles.*

2 oz.	...	5/-	per dozen
4 oz.	...	9/-	"
8 oz.	...	18/-	"

*Own Name printed FREE  
on 3 dozen.*No.  
201**TOOTHPICKS.***FINEST BLEACHED QUILL.*

1d. Bundles of (6)  
½ gross in Glass  
Top Boxes, made  
to stand up for  
Counter Show,  
3/8 each

3d. Bundles  
3 dozen Bundles in  
Glass Top Boxes,  
4/3 each

202

**ARMY TOOTHPICKS.**

3d. Boxes, Regulation	...	2/-	doz. boxes
6d. " containing 4 bundles,	...	4/-	"
1/- " " 8 " "	...	7/6	"



- No. 203  
**TOOTH PASTE.** *In Pots.*  
6d. Square Pots (as Fig. 10) ... 3/6 per dozen  
6d. Round ,, ... 3/3 ,,

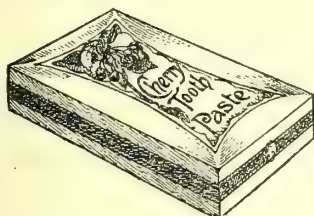


Fig. 10.

*Cherry, Carbolic,  
Areca Nut,  
Rose,  
Camphor,  
&c., in same  
style, at same  
rates.*



Fig. 11.

*Own Name Free on 3 Dozen.*

- No. 204  
205  
**TOOTH POWDERS.**  
*In gold bronze tins, elegant labels in gold and colors.*



Large 6d. size,  
2/- dozen 21/- gross  
Large 1/- size,  
3/- dozen 33/- gross  
Ditto with Tooth Brush,  
6d. size, 3/- doz., 33/- gross  
1/- ,, 4/- ,, 45/- ,,

ROSE, QUININE, SAPONACEOUS, ETC.,  
AT SAME RATES.

*Name and Address printed FREE on 6 dozen.*

- No. 206  
**Boxes of 1 Doz. Assorted, 2/6 dozen.**

- No. 207  
**TOOTH STOPPING.**  
1d. squares, in box ... 3/- per gross  
1d. ovals, on card ... 4/- ,,  
3d. sticks, in box ... 1/- per dozen  
3d. ,, each in gilt cases ... 1/8 ,,

- No. 208  
**VASELINE (CHEESEBOROUGHS).**  
1d. in Handsome Decorated Tins, Filled, 5/- gro.  
10 gross lots, 4/6 gross.  
EMPTY TINS ... 2/6 gross  
5 gross lots, 2/3 gross.  
2d. size, Ditto ... 8/6 gross  
,, Empty ... 4/- ,,  
6d. 2 oz. Metal Screw Cap Bottle, neatly  
labelled ... 2/- dozen 21/- gross  
1/- 4 oz. Ditto, ditto 3/9 dozen 42/- gross  
*Customer's own name on 1 gross lots.*

- No. 209  
**VIOLET POWDER (SCENTED).**



- 1d. Boxes.** Large Card Boxes, wrapped, 3 dozen in box, 4/6 per gross  
**2d.** 1/4 lb. Enamelled Tins, assorted colors, a splendid line, 10/- per gross  
**6d.** 1/4 lb. Wood Barrels, superior quality, beautifully labelled as illustrated, 3/- doz., 33/- gross  
**1/-** 1/2 lb. Barrels, ditto, 5/6 dozen, 60/- gross

OWN NAME printed free on 3 doz. 6d. & 1/- size.

- No. 210  
**VACCINATION SHIELDS.**

No. 211



**WATER SOFTENER**  
(PERFUMED)

In Violet, Rose, Lavender.

1/2 lb. Barrels, 36/- gross  
1 lb. ,, 66/- gross

*Name and Address on 1/2 gross.*

**WASHING GLOVES** (See Flesh Gloves).

**WATERPROOF SHEETING.** To Order.

**MISCELLANEOUS.**

- CORKS—Vial and Dispensing, 6d., 9d. & 1/- gross  
GOLD TINSEL CORD for Perfumery, per lb.  
RIBBONS for Perfumery, all colors, 1/2 d. per yard  
GUT SKINS (Bandruche), for Perfumery.  
SPLIT SKINS (for capping), 2/6 & 3/- each  
FEEDING CUPS from 3/- the doz.  
SYRINGES, CAN DOUCHES, ENEMAS, Etc.  
CRINKLED PAPER SHAVINGS, all colors, 1/4 per lb.  
SPONGES—Toilet Bath, great assortment

# DRUGS, CHEMICALS, ESSENTIAL OILS, SYNTHETIC PERFUMES, Etc.

*Being large Consumers of the following lines, we are enabled to buy at ROCK BOTTOM PRICES, and can offer the same (in bulk) to our Customers, considerably below the usual charges.*

<b>Ammonia</b> in Liquid, Fort ('880) ...	4d. per lb.
6 W. qts. at 3½d. per lb.	
<b>Aromatic Vinegar</b> ...	3/- "
<b>Birdlime</b> , True Japanese ...	1/9 "
<b>Carmine</b> , Pure, 1/6 per oz., 19/- per lb.	
<b>Cocoa Butter</b> (Finest) ...	1/8 per lb.
<b>Cod Liver Oil</b> ...	3/9 gallon.
<b>Chalk</b> , Precipitated ...	22/- per cwt.
,, Prepared ...	12/- "
,, French (fine powder) ...	16/- "
<b>Fullers' Earth</b> (finest) ...	8/- "
<b>Hydrogen Peroxide</b> , 12 Vols., 8d. per lb., 4/6 gal.	
<b>Menthol</b> ...	10/- per lb.
<b>Oatmeal</b> (Floral) ..	6d. "
<b>Orris Root Powder</b> (Florentine), 1 lb. 9d., 14 lb., 8½d. per lb.	
<b>Pot Pourri</b> (selected flowers), 2/6, 3/6 and 5/- per lb.	
<b>Petroleum Jelly</b> (yellow), 7 lb. ( <i>free tins</i> ) at 3d. lb.	
,, (white), 8d. per lb.	
<b>Sachet Powders</b> , 3/-, 5/- and 8/- per lb.	
<b>Shaving Cream</b> , Plain ...	1/- per lb.
,, Almond Scented ...	1/3 "
,, Ambrosial ...	1/6 "
<b>Sal Prunella Balls</b> , 1 lb. 5d., 14 lbs. 4½d. ,, 40/- per cwt.	
,, (Parv), 1 lb. 8d., 14 lbs. 7d. lb., 65/- per cwt.	
,, (Cubes) Small, ¼ inch, 1/- per lb.	
<b>Starch Powder</b> (finest white), 2½d. per lb., 16/- cwt.	

## ESSENTIAL OILS.

<b>Ol. Amygd</b> : Essent. (s. acid), 1 oz. 2/-, 1 lb. 32/-	
<b>Ess. Bergamot</b> (finest) ...	10/- per lb.
<b>Ol. Caryopii</b> , Opt. Ang. ...	3/- "
<b>Ol. Eucalyptus</b> , B.P. Globulus ...	2/8 "
<b>Ol. Lavand.</b> : ,," ...	7/6 "
<b>Otto. Rose</b> , Virgin, Super ...	30/- per oz.

## SYNTHETIC PERFUMES, Etc.

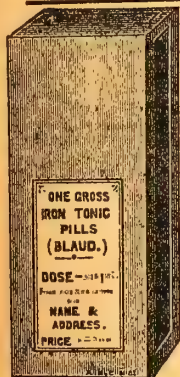
<b>Aubépine</b> (Mayblossom), Crystal ...	1/6 per oz.
,, Liquid ...	2/- "
<b>Coumarin</b> (New M. Hay), Crystal ...	2/- "
<b>Carnation</b> , Pink ...	4/6 "
<b>Clove</b> , Pink ...	2/6 "
<b>Gardenia</b> ...	4/- "
<b>Heliotropine</b> , XIIIs. ...	1/6 "
<b>Jacinth</b> ...	6/6 "
<b>Linaloe</b> (Lily of Valley), 9d. per oz., 9/- per lb.	
<b>Muguet</b> (Lily) ...	1/- per oz.
<b>Musk</b> ...	56/- "
<b>Nerolin</b> ...	2/3 "
<b>Œillet</b> ...	
<b>Rose</b> (Synthetic Otto) ...	6/- "
<b>Terpineol</b> (Lilac) ..	6d. "
<b>Vanillin</b> ( <i>Forty times stronger than the Vanilla Bean</i> ) ...	4/- "
<b>Violet</b> (Artificial) ...	25/- "

*NOTE.—The above prices are subject to alteration (market fluctuations) without notice, and are for the quantities stated; smaller quantities charged extra.*

**CARRIAGE ON THESE GOODS AT BUYERS' EXPENSE.**



# PACKED PROPRIETARY PILLS.



## **BLAUD PILLS.**

1 gross in gold lacquered tin, well lithographed retail label in colours, no name, 28/- gross.  
1 gross metal capped bottle, labelled for retail use. 3 doz. at 3/6 doz. 6 doz. at 3/3 doz.  
12 dozen 3/- dozen. Also white square bottles in colored carton containing 1 gross Pills.

## **LITTLE LIVER PILLS.**

40 in metal capped tube, neatly printed retail wrapper, 28/- gross.

## **NEURALGIA PILLS.**

18 in metal capped tube, artistic retail label in colours, 36/- gross.

## **PHOSPHORUS & DAMIANA PILLS.**

18 in tube, artistic retail label in colours, 36/- gross.

## **ANTICORPULENCY PILLS.**

18 in tube, artistic retail label in colours, 36/- gross.

## **PINK PILLS, GOUT & RHEUMATIC, FEMALE, LITTLE ANTIB. & LITTLE COUGH PILLS.**

"PACKED PILLS."—*British & Colonial Druggist*: "Prices very reasonable, wrapping neat, and general appearance attractive."

With an order of 12 doz. either

## **Little Liver Tubes, or Blaуд Bottles,**

we give a lithographed show card in colours, with any prices marked as required.

**SHOW CARDS OF ALL THE ABOVE SERIES FREE.**

All the above can be had printed with Chemist's Name and Address, in quantities of 1 gross, or 4 x 3 doz. assorted.

**SAMPLES FREE.**

**ALL CARRIAGE PAID.**

Little Liver Pills,

Tube containing 40, 6d.

Blaуд Pills,

Bottle containing 12 doz., 1/-



REGISTERED.

# Parker's

Essence of

# Jamaica Ginger.



REGISTERED.

**A CORDIAL ESSENCE OF UNEQUALLED STRENGTH.**

*This Essence has been approved and highly recommended by the Medical Faculty for the last forty years, as a reliable stimulating carminative in all cases of Flatulency, Dyspepsia, Spasms, Cramp, Giddiness, Gripping Pains, and all Gouty affections.*

## **IMPORTANT.**

The Proprietors (Messrs. Marshalls' Limited) are open to appoint one Chemist in each town where not represented as Special Agent, giving most advantageous terms to push same.

IN BOTTLES, 1/1½, 2/9, 4/6, 11/- SHOWS EXCEPTIONAL PROFITS. PRICES PROTECTED.

**MARSHALLS' LTD., 27, Red Lion Square, LONDON, W.C.**

MARSHALLS',



PERFUMERS,



LONDON.

# BUTTON-HOLE FLOWERS

*Life-like and Natural Perfumes.*

VIOLET.



CARNATION.



GERANIUM.



**6/6** per Dozen Assorted.



Laboratory of Flowers \*

Perfumes

SPECIALTY  
Barnett's  
OPPONAX

Frangipanni  
White Rose  
Jockey Club  
Wood Violet Ess Bouquet  
Heliotrope, Rondeletia  
Chypre &  
others

EAU DE COLOGNE

Barnett's  
Perfumery

LAVENDER WATER

Sachet Powders

FOR PERFUMING PAPERS, LINEN &c.

Opponax, Jockey Club  
Frangipanni, White Rose  
Wood Violet, Ess Bouquet  
Heliotrope & OTHERS

HAIR & TOILET PREPARATIONS

London AND Birmingham.



BARNETT & CO., Laboratory of Flowers, BRISTOL STREET, BIRMINGHAM.

Telephone No. 877.

Telegraphic Address: "OPOPONAX."

## Terms and Discounts.

5% Discount if remitted within 3 Months following delivery.

After 3 months strictly Net.

An Extra 5% is allowed for Prompt Cash one month.

In Bond for Export.—25% Discount off Perfumes; 15% Discount off Sundries. Cash or references required before shipping.

NO LONGER CREDIT THAN THREE MONTHS IS ALLOWED.

JOURNEY TERMS CANNOT BE RECOGNISED.

ACCOUNTS MUST BE REMITTED DIRECT TO THE HOUSE.

**ERRORS** of any description must be advised within three days from receipt of goods.

**LEAKY BOTTLES** must be advised on receipt. Care should be taken that *Cut Glass* stoppers are not loosened by handling, there being no means of tying stoppers in without disfiguring the bottles.

**STOPPERED BOTTLES** will not leak if stocked in an upright position unless placed in the heat of the sun, when evaporation is almost sure to occur or the bottles burst, or perfumes often go rancid.

Soiled Stock (in Bottle Goods only) will be restored free, if returned Carriage Paid, but Perfume or New Boxes will be charged.

Should stoppers be found immovable, the heat of the hand or a lighted match applied to the neck will quickly release them.

**No other Terms than above will be recognised.**

## Proprietary Articles in Bulk.

*Prices subject to Discount.*

Bay Rum, 1st Quality	...	per pint	3/5	...	per gallon	20/-
" 2nd Quality	...	per pint	2/3	...	per gallon	16/-
Brilliantine, Separating	...				per lb.	3/6
Cold Cream, Exceedingly fine. <b>Specialty</b>	...				per lb.	1/6
Cream of Roses, Non-Separating	...			In Winchesters,	per lb.	10d.
Cachous, Assorted. <b>Specialty.</b> Very fine flavours	...				per lb.	2/8
Dentifrice Water, Foaming, Highly perfumed Tooth Wash	...				per pint	3/6
Eau-de-Cologne, 1st Quality	...				per lb.	6/-
" 2nd Quality, very fine, and recommended	...				per lb.	4/-
Eau-de-Quinine, as Bottled	...				per pint	1/6
Hair Wash, Rose, Rosemary, and Cantharides, as Bottled	...				per pint	1/-
Lavender and Musk, very fine	...				per lb.	7/-
Lavender Salts or Cologne, Charging Fluid	...				per lb.	5/-
" " <b>Globules, for Smelling Bottles (small)</b>	...				per lb.	1/6
Lavender Water, Mitcham	...				per lb.	7/-
" <b>French</b>	...				per lb.	4/-
Pomade Extracts, Rose, Cassie, Tuberose, Orange, Jasmine	...				per lb.	8/-
" Violet	...				per lb.	9/-
Reducing Spirit for Perfumes	...				per lb.	4/-
(A Second Washing of Pomade Extract, invaluable in place of Raw Spirit).						
Shaving Cream, as in 6d. and 1s. tubes	...				per lb.	1/3
Toilet Vinegar	...				per lb.	5/-
Tooth Paste, Cherry, same as in 6d. pots	...				per lb.	1/6
Velvane (superior Preparation for the Skin)	...				per lb.	1/6
White Rose Eau-de-Cologne, very fine	...				per lb.	8/-



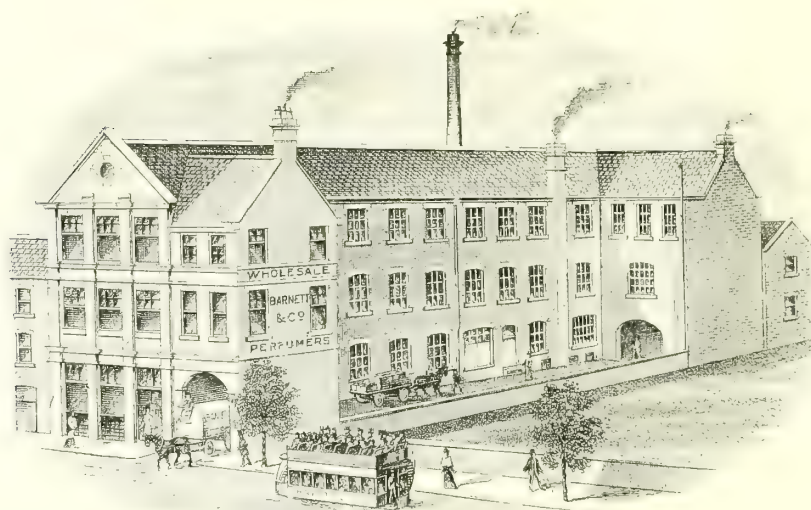
BARNETT & CO., Laboratory of Flowers, BIRMINGHAM, ENGLAND.



T figures indicate Stock Numbers.

All bottles on this sheet contain finest quality perfume.  
Bottom figures indicate reputed Average Capacity in drams (8 drams = 1 oz.)

Prices are per dozen.



FACTORY 120 AND 128 BRISTOL STREET, BIRMINGHAM, ENGLAND.



THE PRINCIPAL'S ROOM.



BARNETT & CO., Laboratory of Flowers, BIRMINGHAM, ENGLAND.



$\frac{82}{8}$  12/9



$\frac{83}{16}$  21/-



$\frac{85\frac{1}{2}}{32}$  37/9



$\frac{68}{40}$  38/-



$\frac{68\frac{1}{2}}{40}$  46/-



$\frac{80}{80}$  92/-



$\frac{44}{24}$  25/6



$\frac{43}{16}$  17/3



$\frac{42}{12}$  15/6



$\frac{219}{12}$  18/11



$\frac{217}{11}$  16/8



$\frac{221 \text{ CUT}}{12}$  22/-



$\frac{110 \text{ CUT}}{16}$  26/8



$\frac{83\frac{1}{2}}{32}$  37/9



$\frac{83\frac{1}{2}}{16}$  21/-



$\frac{82\frac{1}{2}}{8}$  12/9



$\frac{39}{16}$  20/6



$\frac{38}{8}$  11/-



$\frac{66 \text{ AB}}{13}$  13/9

HUDSON B<sup>MAH</sup>

All bottles on this sheet contain finest quality perfume. If Triple quality is required prices proportionately lower. Figures indicate Stock Numbers.

Bottom figures indicate reputed Average Capacity in drams (8 drams = 1 oz.)

Prices are per dozen.



VIEW—A CORNER OF THE SHOW ROOMS.



VIEW—ANOTHER CORNER OF THE SHOW ROOMS.



BARNETT & CO., Laboratory of Flowers, BIRMINGHAM, ENGLAND.



All bottles on this sheet labelled Barnett & Co. contain finest quality perfume, other bottles contain triple quality  
 op figures indicate Stock Numbers. Bottom figures indicate reputed Average Capacity in drams (8 drams = 1 oz.)

Prices are per dozen



VIEW OF ONE OF THE LABORATORIES.



ANOTHER VIEW OF ONE OF THE LABORATORIES ; SHOWING DISINTEGRATOR AND STILL.

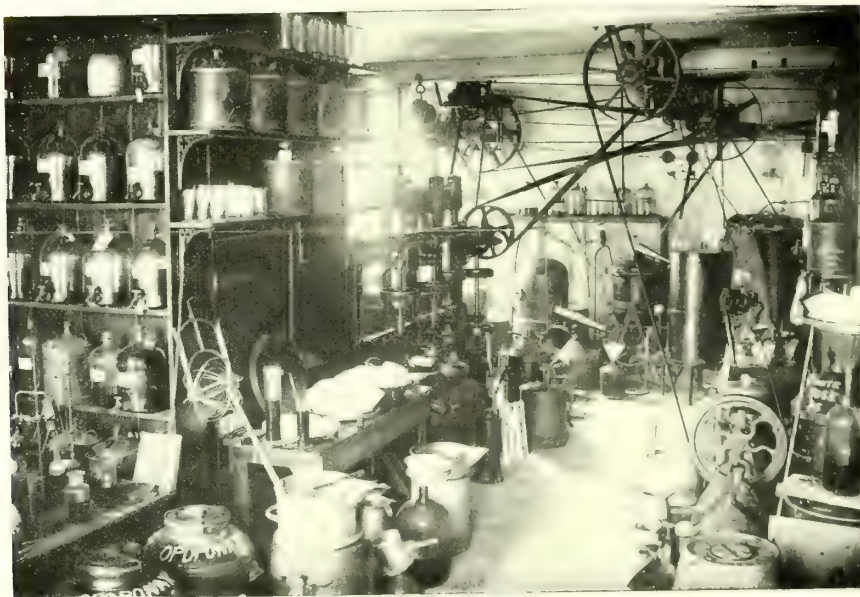




Top figures indicate Stock Numbers.

Bottom figures indicate reputed Average Capacity in drams (8 drams=1 oz.)

Prices are per dozen



PART VIEW OF ONE OF THE LABORATORIES, SHOWING MACHINERY AND STILL.



PART OF THE BOTTLE STORE.



 94 1/4 LB 12/-	  ALSO "CHERRY" 91A 4/6	 160 4/6	 ALSO "CHERRY" 162 4/6	 IN TWO SIZES 92 93 4/6 8/-	
 07 6 oz 6/8	 106 2 oz 4/6	 ALSO IN OTHER POMADES 69 2 oz 4/6	 163 1 1/2 oz 4/6	 ALSO IN CARBOLIC, COROLINE, OTTO OF ROSE 4 SIZES 2/- 2/9 3/6 6/6	 ALSO IN FULLERS EARTH SIZE 202 1/4 LB 4/6
 N 8A 6 oz: 25/6 N 8 10 oz: 38/-	 211 9/-	 56 4/- 4 oz	 109 6/8 3 oz	 108 4/6 2 oz	 59 9/- 4 oz HUDSON, B-5

Top numbers indicate Stock Numbers.

Prices are per dozen.



THE FINISHING ROOM.



PART OF THE BOTTLING ROOM.





$\frac{237}{16}$  39/-



$\frac{238}{16}$  39/-



$\frac{232}{8}$  12/6



$\frac{235}{12}$  37/9



$\frac{236}{16}$  39/-



$\frac{68}{36}$  38/-



$\frac{197}{27}$  40/-



$\frac{246}{48}$  18/-



$\frac{223}{32}$  14/6



$\frac{244}{17}$  31/6



$\frac{67}{17}$  21/-



$\frac{240}{32}$  84/-



$\frac{242}{32}$  84/-



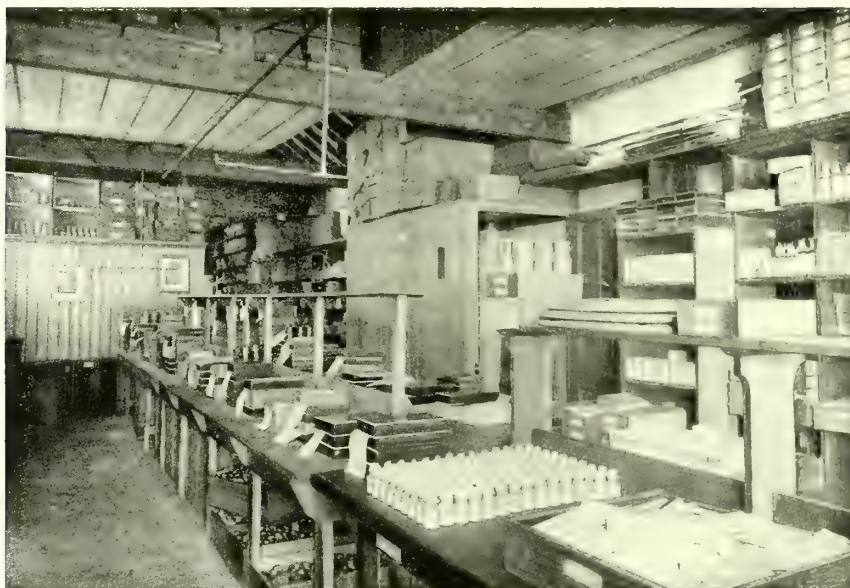
$\frac{239}{24}$  76/8



$\frac{243}{20}$  66/9



$\frac{241}{32}$  84/-



PART OF THE STOCK ROOM.



ANOTHER VIEW OF ONE OF THE LABORATORIES.

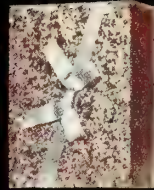




$\frac{7133}{3/132}$  8/8 EACH



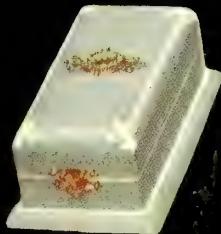
$\frac{736\frac{1}{2}}{2/82}$  32/6 DOZ.



$\frac{7132}{2/154}$  5/6 EACH



$\frac{5891}{1/129}$  29/- DOZ.



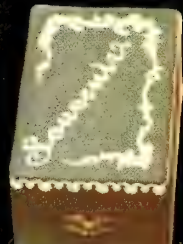
$\frac{75}{1/147}$  6/- EACH



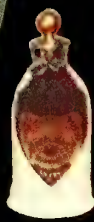
$\frac{626\frac{1}{2}}{1/82}$  15/- DOZ.



$\frac{6819}{1/111}$  6/6 EACH



$\frac{8}{1/149}$  9/6 EACH



$\frac{5}{1/66AB}$  20/5 DOZ.



$\frac{7L}{1/195}$  9/6 EACH



HUDSON BRAND

Top figures indicate Stock Numbers. Bottom figures indicate Stock Number of Bottle. Prices are per dozen. We are continually producing New Patterns, we cannot always guarantee to supply bottles or Fancy Cases out of date. After they cease to be a novelty we do not stock them.



VIEW OF ONE OF THE PACKING ROOMS.



GRASSE—GENERAL VIEW OF GRASSE : SHOWING BARNETT AND CO.'S POMADE FACTORY AND ESSENTIAL OIL DISTILLERY.





179  
8 OZ: 8/-



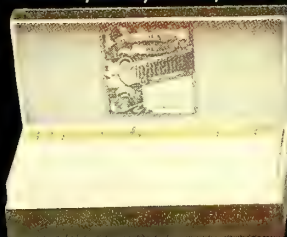
201  
4 OZ: 4/6

BOXES OF  
10 22 50 100  
4/9 8/9 18/- 35/-

PERFUMED



STOCK NO 14  
BOXES OF 10 20 50 100  
4/8 9/4 22/6 43/10



178  
8 OZ: 8/-



245  
9 OZ: 12/-



177  
8 OZ: 8/-



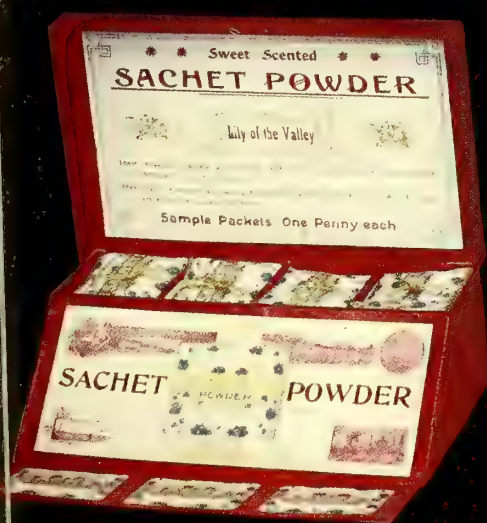
7 IN BOX 7/6 DOZ. BOXES



2/- THE CARD



3 DOZ. IN BOX 8/9 GROSS



6 DOZ. IN BOX 9/- GROSS



12 IN BOX 3/- THE BOX



6 DOZ. IN BOX 8/- GROSS

HUDSON B.M.



*Reprint from BIRMINGHAM DAILY POST, December 27th, 1898.*

# ... Perfumes from Birmingham. ...

## A New Local Industry.

Many new industries have sprung up in Birmingham during the last twenty years, testifying alike to the enterprise of its capitalists and to the skill and versatility of its artisans; but these developments have been chiefly akin to the hardware and jewellery trades, for which the city has long been celebrated. He would have been a bold prophet who, twenty years ago, would have predicted that before the close of the century Birmingham would have added to its list of successful manufactures that of the production of perfumes. London, Paris, and Cologne have hitherto been regarded as the appropriate centres for the exercise of the perfumer's art, but these places enjoy no peculiar facility nor any economical advantage. Their reputation is simply due to the circumstance that those who have made a study of this interesting subject have chosen these places for the scene of their operations. The number of such persons is limited, and their secrets are most jealously guarded. But as the seeds of plants are sometimes carried by birds to new and strange soil, so the seed of this particular industry has found its way to Birmingham, and has taken what we believe to be firm root in productive ground.

### BIRMINGHAM OR NOWHERE.

Birmingham has never had full credit for the good work that is done by its citizens. The jewellery trade is a standing example of this. The best products of the Birmingham workshops find their way into the market as "London made," and, it is alleged, they would not be looked at if customers knew them to be Birmingham ware. Mindful of this prejudice, Mr. Barnett, when he resolved upon starting in the perfumery business, proposed to go to London, and many friends counselled him to do so. "Birmingham perfumes!" they exclaimed, "why, no one will hear of them. They may come to Birmingham for buttons or for pots and pans, but never for perfumes." It was not an unreasonable view, but Mr. Barnett took the advice of a mentor who declared that "if the thing cannot be done in Birmingham it cannot be done anywhere." At the present time, and without any expenditure in advertising, Mr. Barnett claims to have built up the largest home trade in the kingdom amongst the higher-class chemists in furnishing them with standard perfumes and with specially-compounded scents, to which they attach their own or some local name. In addition to this, Mr. Barnett sends out large quantities of the finest grade of floral perfumes, under his own tastefully-designed labels. Upon the principle that a prophet is not without honour except in his own country, the Birmingham perfumes are less seen in Birmingham shops than elsewhere, but that is a matter which will doubtless right itself in time. Many perfume manufacturers are simply compounders, but at the Bristol Street establishment processes are carried much further back than this, and many original appliances have been devised with a view to economy and efficiency. The one thing that it is not possible to do in this country is to grow the flowers and plants from which important primary materials for the laboratory are derived; and the English manufacturer has to obtain these from more favoured localities. In this respect, however, he is in much the same position as the perfumer of any age or country. International commerce in the constituents of perfumes dates from a very remote past, as does also the secrecy pertaining to the practice of the art. The ancient Egyptians, leaders as they were of the civilisation of their age, were also pioneers in the path of luxury. The preparation of incense and fragrant ointments flourished among them, but many of the materials were brought by foreign merchants. The Ishmaelites, to whom Joseph was sold as a slave, are stated to have been travelling to Egypt from Gilead with "spicery, and balm, and myrrh." Even in the Song of Solomon, the enumeration of cosmetics includes a comprehensive reference to "all powders of the merchant."

### THE BASIS OF MODERN PERFUMS.

The substances from which modern perfumes are derived are many in number. They comprise animal secretions, such as musk, civet, and ambergris; aromatic gums, essential oils, and extracts from fragrant flowers. It is in connection with floral sources that modern perfumery chiefly differs from that of earlier times. Huge flower farms are now carried on in the south of France for the chief purpose of furnishing fragrant extracts. Under the sunny skies of Grasse, Nice, and Cannes there are cultivated in great profusion roses, jonquils, violets, tuberose, orange flowers, and cassie. It should be explained that the fluid substance of which a bottle of first-class scent consists is not water, but highly-rectified spirits of wine, impregnated with the desired odour; but the infusion of fragrant flowers in spirits of wine would fail to produce the desired result. An intermediate process is requisite, and that consists in enchainning the subtle perfume of the flowers by means of fat, for which they have a very strong affinity, whereas spirit is simply a solvent. Some flowers are macerated in fat, while others are simply brought into close juxtaposition to grease-covered screens, with the result that the fat

becomes heavily charged with perfume, and will yield it afterwards to the spirits of wine. Thousands of tons of flowers are gathered by the peasantry and are conveyed to the factories, whose product, in the form of scent-charged fat or pomade, are put up in drums of about 12lb. weight and sold to the manufacturer of perfumes. The first task of the manufacturer, unless this work is done for him by an intermediary, is to derive from the pomades what is called a "simple extract." For this purpose Mr. Barnett has designed a number of original appliances, which are highly efficient in their results. The pomade, worth from 5s. 6d. to 7s. a pound, is first opened out into filaments by a squeezer, and is then placed in a churn containing some twenty gallons of spirits. The beaters of the churn are kept rotating by machinery for about a week, at the end of which time the spirit is drawn off, and is found to have taken up the odour of the flowers in an intense degree. The spirit is afterwards frozen to facilitate the removal of a certain residue of fat, and after this it forms a perfectly clear and limpid "simple extract," and is placed upon the laboratory shelf. Civet, a nasty, soft-soapy looking substance, with an odour amounting to a positive stench, is also immersed in spirit to furnish a "tincture." As the substance holds very closely together, the vessel in which the tincture is to be produced is placed upon a rocking frame, which is kept in motion for a prolonged period in order to get the spirit as strongly impregnated as possible. Pods of the musk deer are kept steeped for years in copper jars; and here it may be mentioned that perfume, like wine, greatly improves by age, provided that it be kept in the dark and at a tolerably uniform temperature. On the other hand, a bottle of scent placed in the sunshine of a shop window and subjected to extreme variations of heat and cold will often lose all the delicacy of its aroma. Another process carried on in the manufactory is the disintegration and extraction by spirits of the highly-useful aroma of the orris root, and in this connection Mr. Barnett has contrived a hydraulic press, by means of which a considerable quantity of spirit is recovered from orris powder which to all appearance has been drained dry.

### IN THE LABORATORY.

So much for some only of the processes connected with the production of materials. We pass on to the laboratory, where these materials are diluted and blended into articles for the toilet. It is here where the receipt-book, and, still more, a cultivated appreciation of odour, comes into play. Scents are placed upon the market bearing the names of most of the known odoriferous flowers. Few only of these are direct extracts from the flowers by which they are called. The vast majority are imitations—perfume pictures, in fact—of the originals. Violet scent is not wholly derived from the violet, but the floral extract has to be helped and reinforced by odours more permanent, and derived from other sources. Of late years synthetic fragrant oils have been obtained from that protean substance coal-tar. These, which are analogous to the beautiful aniline colours obtained from the same substance, are of occasional use in the perfumer's laboratory, but in most cases they lack the desirable refinement. The laboratory contains probably as many as 500 different vessels, and the blending of their contents is as infinite as the blending of colours by an artist. Take a few illustrations of well-known favourites. The old-fashioned "Ess Bouquet" is composed of eight ingredients in their appropriate proportions, the predominant elements being musk and vanilla. "Jockey Club" makes a call upon nine sources of supply, musk, civet, and orris being prominent. "Opoanax" has twelve ingredients; while "Parma Violet" scent has fourteen. Upon the other hand, there are some simpler blends. Among them is the once fashionable but now vulgar patchouli, which consists of a dilution of patchouli oil and otto of roses. Many improvements have been made in the formulæ originally in use, and the odours of not a few delicately-scented flowers are now transferred to the toilet table which ten years ago were not regarded as within the range of practical treatment. It may be remarked that attempts have been made, but with only limited success, to classify fragrant odours in a manner analogous to the notes of the musical scale and to the colours of the spectrum. Such a classification should be theoretically possible, but the human sense of smell appears not to be sufficiently developed. The late Mr. Eugene Rimmel suggested a division of odours into eighteen classes, but even he was not wholly satisfied with the result. The manufacture of perfumes, ministering as it does to the pleasure of mankind, is, we are glad to learn, by no means deleterious to the health of those engaged in it. "I have known the smell of some essences to turn the stomach of a man called in to assist in emptying a large vessel," Mr. Barnett says, but the health generally of the employees is good. He has known no case of infectious disease among them, and no one in the place suffered from the great epidemic of influenza which invaded most industrial establishments in Birmingham a few years ago. There are other features of the manufactory which are of interest, but space forbids their enumeration. We may, however, add that great attention is paid to the attractive presentation of the goods produced.



**Barnett & Co., Laboratory of Flowers,**  
**.. BRISTOL STREET, BIRMINGHAM. ..**

**... Perfumes in Bulk. ...**

**T**HE following numbers, viz. :—Nos. 24, 30, 36, 40, 60 are Catalogue numbers only, originally adopted by our Firm to designate the different varieties manufactured, and have no relation whatever to any market standard. Competing firms selling under these numbers at lower prices simply pay us the compliment of imitation and impose on their customers. We do not profess to sell cheap, or low-class perfumes, but where quality is the standard we claim to be the Premier House.

	Prices Subject to Discount.	Net Cash One Month.
<b>Triple French Essences</b> ... .. No. <b>24</b> We warrant these Pomade Essences to be of the highest quality. On comparison they will be found equal, if not superior, to the ordinary French Essences of Commerce usually sold at 10/6 per lb. Beware of synthetic or artificial perfumes which deteriorate and soon go rancid.	<b>9/4 lb.</b>	<b>8/5 lb.</b>
<b>Quadruple Essences</b> ... .. No. <b>30</b> Of a higher concentration than No 24 quality.	<b>11/- lb.</b>	<b>10/- lb.</b>
<b>Barnett's Special Essences</b> ... .. No. <b>36</b> <b>ARMA VIOLET (Special)</b> ... .. No. <b>40</b> " " (Extra) ... .. No. <b>60</b>	<b>13/7 lb.</b> <b>16/- lb.</b> <b>23/- lb.</b>	<b>12/3 lb.</b> <b>14/5 lb.</b> <b>20/8 lb.</b>
In the production of these Essences we claim to have reached a degree of perfection hitherto unattained by any house in the trade, and for softness, delicacy, and sustained odour, we believe that it is impossible to match these perfumes. Where good prices can be obtained they create a continuous demand, and when requisite will bear dilution to any required strength by means of the specially prepared Spirit sold by us at 4/- lb. for this purpose. Do not use common Tincture Spirit or unsoftened Perfume Spirit if you desire good results.		

**NOTE**—In all cases where  $\frac{1}{2}$  lbs and  $\frac{1}{4}$  lbs. are ordered 3d. and 6d. extra respectively will be charged.

**The following are a few of the LEADING ODOURS,  
Specially Recommended.**

<b>Opoponax</b>	<b>Frangipanni</b>	<b>Lily of the Valley</b>	<b>White Rose</b>
<b>Apple Blossom</b>	<b>Wood Violet</b>	<b>May Blossom</b>	<b>Peau de Espagne</b>
<b>Chypre</b>	<b>Honeysuckle</b>	<b>Iris Blanc</b>	<b>Wallflower</b>
<b>Ess Bouquet</b>	<b>Heliotrope</b>	<b>Stephanotis</b>	<b>White Lilac</b>
	<b>Jockey Club</b>	<b>Violette de Parme</b>	<b>Ylang Ylang</b>

Barnett &amp; Co., Laboratory of Flowers,

.. BRISTOL STREET, BIRMINGHAM. ..

## Special List.

Articles for which BARNETT & CO. are specially able to compete, being large buyers, importers, and manufacturers for their own consumption.

<b>Adeps Lanæ</b> (Anhydrous) ... ..	per lb.	1/-
<b>Aqua Rosæ</b> (Triple Distilled) own distillation ... ..	per lb.	8d.
	(8 lbs., 7d. lb.) ; 50 lb. Bottles,	21/-
.. .. (Quadruple Distilled) own distillation ... ..	per lb.	9d. ; 50 lb. Bottles, 30/-
.. <b>Aurantii</b> (Triple Distilled) } Same as Aqua Rosæ.		
.. .. (Quadruple Distilled) }		
<b>Borax</b> (Powdered) ... ..	per lb.	3d.
<b>Carmine</b> , Finest Quality ... ..	per oz.	1/8
<b>Civet</b> , Absolutely Pure ... ..	per oz.	15/-
<b>Cold Cream</b> , Specialty Own Make, Non separable ... ..	per lb.	1/6
<b>Chenille</b> , Brass Wire, Non-corrodible ... ..	per yard	1d. }
	Bundle 108 yards,	5/- }
<b>Cetaceum</b> , Ang. ... ..	per lb.	1/9
<b>Cera Alba</b> , Placinta .. ..	per lb.	2/6
<b>Creta Præcep</b> ... ..	per lb.	4d.
<b>Ess. Musk</b> , Special Concentration ... ..	per oz.	2/-
<b>Ess. Vanilla</b> ... ..	per lb.	6/6
<b>Fuller's Earth</b> , Finest Levigated ... ..	per 28 lbs.	2/6
<b>Musk</b> , Finest Tonquin Grain ... ..	per oz.	150/-
	Price varies according to market.	
.. Artificial, Large Crystals 100 % .. ..	per oz.	84/-
<b>Oil, Almonds Essent. Ang., Sine Acid Pruss.</b> ... ..	per oz.	2/-
.. <b>Amygd. Dulc.</b> ... ..	per lb.	1/3 ; in 56 lb. Tins, 1/-
.. <b>Bergamot</b> .. ..	per lb.	10/6
.. <b>Geranium Rose</b> , finest, own distillation ... ..	per oz.	2/8
.. <b>Lavender Ang.</b> , 9 years old ... ..	per lb.	40/-
.. .. <b>French</b> , 4 years old, re-distilled, own distillation ... ..	per lb.	10/-
.. <b>Lemon</b> ... ..	per lb.	4/- & 6/-
.. <b>Neroli</b> , own distillation ... ..	per oz.	6/6 & 10/-
.. <b>Petit Grain</b> , own distillation ... ..	per oz.	1/6
.. <b>Palchouly</b> ... ..	per oz.	3/-
.. <b>Rosemary</b> , finest ... ..	per lb.	4/6
.. <b>Ylang Ylang</b> , finest ... ..	per oz.	25/-
Other Oils used in Perfumery (Prices on Application).		
<b>Otto Rose</b> , finest Virgin, guaranteed pure ... ..	per oz.	28/-
.. Artificial ... ..	per oz.	16/-
<b>Orris Root</b> . Selected ... ..	per lb.	8d.
.. Powdered ... ..	per lb.	1/-
<b>Petroleum Oil</b> , White, Odourless ... ..	per lb.	8d.
<b>Petroleum Jelly</b> , White ... ..	per lb.	6 3/4d.
<b>Prunella Balls</b> , Small, for Lavender Salts ... ..	per lb.	1/6
<b>Ribbons</b> , for Tying Perfumery ... ..	per yard	1 1/4d. & 1 1/2d.
<b>SPIRITUS AMMONIÆ AROMATICUS B P. 1898</b> ... ..	per lb.	2/9
Prepared from Fine Perfume Spirit, not Common Tincture Spirit.		
<b>Split Skins</b> , Large, Special Quality, for capping perfumery ... ..	each	2/9
<b>Skins Gut</b> ... ..	per doz.	2/6
<b>Tonquin Beans</b> , Angostura Picked ... ..	per oz.	10d.
.. Para ... ..	per lb.	1/-
<b>Vanilla Beans</b> , Price according to market		

QUOTATIONS ARE SUBJECT TO FLUCTUATIONS OF THE MARKET.

Free on Rail, Birmingham.

Discount 5% 3 Months.

10% Cash 1 Month from date of Invoice.



# “HEARONS”

A RECORD of Progress  
since 1714 respect-  
ing the business of . . . .  
Hearon, Squire & Francis,  
Limited, Southwark St.,  
London, S.E.







# A Record of Progress.

## On the Eve of the . . . Twentieth Century.

**A**MONG London houses to whom the designation, "Wholesale Druggist" has applied since the commencement of their business career, few can trace their history in unbroken succession back to the

eighteenth century. This honorable distinction has the house of HEARON, SQUIRE & FRANCIS, LIMITED, of Southwark. The earliest date that can be assigned to the firm by documentary proof is 1714, when an Apothecary and Wholesale Druggist of the name of Kirk, was in business at 95, Bishopsgate St. Within. There is traditional and other evidence that a Mr. Kirk was at the same address in the middle of the seventeenth century, but whether he was an ancestor of the apothecary, or whether his business was bequeathed to him, is a mystery. Anyway, 95, Bishopsgate Street Within is the birthplace of the business which to-day is carried on at 38 and 40, Southwark Street, on the southern side of the River.

Bishopsgate sheltered the business for nearly a century and a half, and during that period there were many changes of a personal character, while successive generations of the firm acquired the houses at each side of the original establishment to give additional room for work and storage. The changes in the firm during the first century of its existence are represented—

- 1714—MR. APOTHECARY KIRK.
- 1769—BARTLETT & SHARPE.
- 1786—HARDWICK, MOON & SHARPE.
- 1795—SHARPE, KIRK, GRATTON & HEARON
- 1800—KIRK, GRATTON & HEARON.
- 1816—KIRK, HEARON & BRIGHT.

It seems probable that in the earlier years of the nineteenth century "Kirk" was retained in the firm's name, although there was no person so called actually in the firm. In 1816 the active partners were Mr. Richard Hearon, Mr. Brailsford Bright and Mr. Goswill Johnson. They soon dropped the name "Kirk," the trading name becoming—

HEARON, BRIGHT & JOHNSON.

HEARON, BRIGHT & THOMPSON.

HEARON, BRIGHT & McCULLOCH



The Late Mr. WILLIAM McCULLOCH.  
*As many Metropolitan Pharmacists knew him.*

Mr. Henry Hearon, Mr. Brailsford Bright and Mr. William McCulloch were at that time (1843) the partners. Mr. Henry Hearon was the last of the Hearons in the drug business, and his death in 1843 was the occasion of Mr. Squire joining the firm. Mr. Bright no longer took an active part in the business. His son, Sir Charles Bright won distinction and honour as an inventor of Telegraphic Instruments. The firm's name remained—

HEARON,

McCULLOCH &

AND SQUIRE,

from 1843 until 1865. Mr. William Squire was a Yorkshire man, and one of the firm's most successful travellers before he was taken into partnership. He stayed "on the road" after he became a partner. By 1860, the Bishopsgate Street premises had to be vacated, the modern business quite outrunning its capacity, and more extensive premises were obtained at No. 5 Coleman St., where the firm remained for 30 years.

The name of Francis was added to the firm's title in 1866, when Mr. George Baggett Francis became a partner. In 1870 the style was changed to Hearon,

Squire & Francis, and still remains so saving for the addition of the word "Limited" in consequence of the conversion of the firm into a Limited Liability Company in July 1899. It is interesting to note that Mr. William McCulloch and Mr. William Squire were original Members of the Pharmaceutical Society, and Mr. G. B. Francis, at that time an assistant with Messrs. John Bell & Co., 338, Oxford Street, was one of the first or "original"

Associates of the Society. Mr Francis, in due course, was put in charge of the Bell "Elaboratory," and it was during his period of Directorship that Hunt painted the famous picture of it. Mr. Francis lived in the Oxford Street house, and there his sons, Mr. George Bult Francis and Mr. William Henry Francis, were born.

When Mr. William Squire retired from the firm Hearon, Squire & Francis in 1882, Mr. Francis, the sole remaining partner, took his two sons above named into partnership, and on the death of their father, they alone were, and continued to be the responsible heads of the business until its conversion into a Limited Company.

*Enclosed are the*

*the balance of your note for £1000  
which is due to me from the 1st of  
£12 7 0 the rest of the balance is in order  
with the Bank. It is said the other side  
was obliged to be taken out of the account  
Generalist of the Bank which made the £1000  
so much and the £13 7 0 was not  
for the letter but the opinion is contained  
the remainder of the Bell £7 13 0 is  
paid to your Credit  
I am Sir  
for Partners & self  
Mrs. G. H. Hearon  
D. H. Hearon*

*Reduced facsimile of a letter written in 1890, by Mr. Richard  
Hearon, "for partners and self," to Mr. F. Smith,  
Chemist, Chancery.*



The Late MR. WILLIAM SQUIRE.



The Late MR. GEORGE BAGGETT FRANCIS.



## Present Day Premises.

**A**S already stated the firm removed in 1890 from Coleman St. to Southwark St., the change being dictated partly by the expiry of a lease, but chiefly owing to the need for a larger area for manufacturing purposes, and for the conduct of the business. The spacious buildings in Southwark St. are yearly becoming straitened by the pressure of growing departments, and new departures which require such firms to be continually adapting their organization to the changing requirements of their customers. The series of illustrations here given refer to the more

seen a unique collection of specimens of rare Drugs and fine Chemicals.

The central area of the covered yard of No. 38, which is approached by a wagon entrance from Southwark Street is utilized for the receiving of

**EMPTYES.** The east side is reserved for the boiler and Engine, On the north side is a large Still and Condenser, solely used for the production of distilled water, and on the west side the uninteresting but necessary work of washing bottles is always in operation. The Yard Entrance intersects the well-lighted, and commodious Town and Country Offices,

The floor immediately above and surrounding the yard,



**WAREHOUSES AND LABORATORIES.**  
40 and 38, SOUTHWARK STREET, S.E.

The entrance is at No. 38, and inside is the Yard next illustrated.

important departments. The buildings Nos. 38 and 40 Southwark Street, consist of five floors and basement, the latter passing under the street. The floor space is about 50,000 square feet, and the floors are connected by lifts, worked by hand and steam power. The extensive basement is devoted largely to the storage of Ointments, Solid Extracts, Distilled Waters, and original packages of "Wet" goods. Here also are Wine Cellar, and Vaults all under lock and key. These contain respectively, Ethers, Acids, Syrups, Essential Oils, Opium, Saffron, and Spirit of Wine.

**PACKING.** Ascending to the ground floor, No. 40 is occupied with the packing and despatching of goods, the offices connected therewith, and in addition, a room fitted up as a Museum, in which may be

is a store-room for bottles, and over this, and running the whole depth of the building are three important Departments. The first is the *Pill Room* the output of which from small beginnings has rapidly grown, until it has assumed proportions that loudly call for increased accommodation. This steady increase is due to the use of pure drugs, and the well made and finished appearance of the pills, a result which has been reached by patient and persevering devotion to the study of this branch of pharmacy. The second is the room set apart for the practice of the ancient and mystic art of per-

**PERFUMERY.** For more than thirty years "Heron" floral bouquet Essences have been bought and sold by Chemists in this and other countries. Among the newer "Heron" perfumes, "Avon" and "Real" Violets have commanded an extensive and ready sale, and the same

brand of "Lily of the Valley," has been pronounced by more than one customer as "champion."

The third room comprises four-fifths of the 90 feet frontage of 38 and 40, and is known as the Dry Floor. Here Drugs, hand picked and cleaned, whole and in powder, are stored in suitable containers, and from these all orders for retail sale are executed. At the extreme ends of the extensive floor space are a "Camphor" Room, and a "Poison" Room. This precaution in the handling of poisons, is repeated in the

Tinctures, and all spirituous preparations, and Chemicals requiring to be sent out in glass or stoneware. This room has a double flooring, enclosing a layer of thick linoleum, which effectually prevents any leakage to the floor below in case of accidental breakages. To the east is a room devoted to the manufacture of Tinctures and other preparations which require for their production the application of the process of percolation. Immediately behind it is the room where poisons are stocked, and dealt out by a responsible assistant. At the back of these are situated the laboratories. The Pan-

#### TINCTURE MAKING.



THE YARD:

Used principally for receiving Empties, as this everyday scene testifies. . .

Chemical Room, so that both poisonous drugs and chemicals are under the supervision and control of specially appointed assistants. On the side opposite to the Pill Room, accommodation is provided for the manufacture of Granular Effervescent preparations. The Board Room and the private Office of Mr. G. B. Francis account for the remaining fifth.

#### CHEMICALS AND WETS.

On the next higher floor is the "Chemical" and "Wet" Room, extending to about 1,520 square feet. It is amply fitted with strong shelving, arranged in bays for the storing of

Room includes several flat evaporating pans (copper and enamel), provided with mechanical stirrers worked by steam; capacious steam pans and tanks for the exhaustion of large quantities of crude drugs at one operation, and Vacuum apparatus. The evaporation of liquids *in vacuo* has long been a special feature in the manufacture of their pharmaceutical preparations requiring concentration. The west Laboratory contains a number of Stills of various sizes and shapes according to the specific purposes for which they are required, such as the



**PRIVATE  
LABORATORY.**

manufacture of Sal Volatile, the distillation of Spirits, Essential Oils, and Medicated Waters. Leading out of the Still Room is the Private Laboratory. The uses to which it is applied are fourfold.

- (a) The conduct of Chemical Analyses generally
- (b) The examination of Drugs and Chemicals received into stock.

**DRUG  
PICKING.**

Room has an area of about 2,300 feet, and is used partly for the storage of original packages of dry goods, and partly for the cleaning and picking of drugs, while on the north side is a room in which an old servant busies himself with his favourite occupation of trimming rhubarb, an art in which he believes himself to be unsurpassed. Directly opposite is a second room in which is kept a large stock of the various kinds of Aloes. Here is to be found a specimen of the original



**MANUFACTURING LABORATORY.  
PAN ROOM.**

Devoted to evaporating liquid preparations for conversion into extracts, either in the open or in Vacuo.

- (c) The prosecution for clients of investigations requiring the application of special scientific knowledge.

- (d) The perfecting of new formulæ preparatory to their general adoption.

The various manufacturing departments are under the directorship of Mr. W. A. H. Naylor, F.I.C., F.C.S.

The floor of No. 40 on the same level as the Chemical

Socotrine Aloes collected 30 years ago. To this drug the house has given special attention for very many years.

The floor directly over this has the same superficial area, and is used solely for the storage of raw drugs, packed in the form in which they appear on the market, and includes barks, roots, leaves, seeds and whatever goes to make up the unworked stock of a wholesale druggist.

**STORAGE.**



THE OIL ROOM.

*The Quarter Casks in front are Olive Oil. Good Light Oil in barrels, as shown at the back, and Castor Oil in cases. Behind the man on the left is where Oils are filtered.*



THE CHEMICAL AND WET ROOM.



The top floor, companion in size to the two below, is an Oil Room, with a zinc-lined flooring. Provision is made for warming it by steam heat, or for reducing to freezing temperature a portion of it which has been separated and enclosed. Here too is a special appliance for the filtration of Castor Oil. Castor, Cod Liver, Olive and Almond Oils bulk large as the accompanying illustration shows. The roof is specially fitted, and utilized for bleaching oils.

OILS.

#### OVERFLOW WAREHOUSE.

In Bowling Green Lane, which is situated conveniently near to 38 and 40 Southwark Street, and close by Guy's Hospital, the firm have a compact building standing four square, with a commanding entrance and another at the side, entirely devoted to storage. It consists of four stories, each floor having a superficial area of 1000 feet. On the topmost floor is a crane and the other floors have trap-doors which coincide in their positions so that heavy packages may be conveniently



**DRY WAREHOUSE.  
BOWLING GREEN LANE.**

This is entirely devoted to original packages of Rhubarb, Cascara, Sagrada, Pareira Brava, and similar drugs.

At the topmost story of No. 38 is located the newest department: the packing of Specialities for the retail trade. The firm entered upon this business with some degree of hesitancy, but their apprehensions have proved groundless, and to-day this latest of their enterprises gives promise of an important future. In all, five rooms are occupied with this work, one of which is used for the printing of all labels, and any circulars or packages for which letter-press is required.

PACKING  
SPECIALITIES.

conveyed from floor to floor. Here are warehoused tons of original packages, including bales of Gentian, Pareira, Nux Vomica, Quillaia Bark, Liquorice Root, Cascara Sagrada, and Rhatany, baskets of Cassia fistula, barrels of Cascarilla and Hellebore, and much other reserve stock from which the supplies at 38 and 40 Southwark Street are daily replenished.



THE PRIVATE  
LABORATORY.

*Here the Efficiency of the work done in all manufacturing departments is controlled under the direction of Mr. W. A. H. Naylor, and analyses and research are carried out.*



MANUFACTURING LABORATORY.  
SPIRIT STILL.

*These Still's are principally used for recovering Spirit from Tincture mares. The big tank contains the condenser.*





THE PILL ROOM.

*In the left hand corner front is a large pill press, whence the pill masses come to the back of the room where they are cut. The workers are shown in the front.*



A ROOM IN THE  
PACKING DEPARTMENT.

*One or five rooms devoted to the packing of Counter Specialties, Perfumes, and Toilet Preparations.*

## The Directorate.

**I**T may not be inappropriate to refer to the seven gentlemen who constitute the Directorate of Hearon, Squire & Francis, Limited, and whose portraits accompany this sketch,

MR. GEORGE BULT FRANCIS, the Chairman and Managing Director, was, as already mentioned, born at the historic house of John Bell & Co., 338, Oxford Street. He was educated at the City of London School, and afterwards spent two years in Germany. For the next two years he was a pupil with Mr. T. P. Gostling of Diss, where he became conversant with the everyday requirements of retail pharmacy. In order to equip himself on the scientific side of his calling he completed a term of study at the school of the Pharmaceutical Society, and at the end of his course passed the minor Examination. He was however reluctantly compelled to give up all thought of taking the Major Diploma, as his services were pressingly needed in the business. He was duly initiated at 5, Coleman Street, in 1870, and after having had a thorough drilling in each department, and also a couple of years round town, he took to the road in 1875, and travelled at different periods, every round except the North-Eastern District until 1883, when his father being laid aside



MR. GEO. BULT FRANCIS, F.C.S.,  
*Chairman of the Directorate.*

by illness, and Mr. Squire having retired, he was called home to take the management. He is a member of the Pharmaceutical Society and a Fellow of the Chemical Society. He represents the Company on the Drug and Chemical Section of the Chamber of Commerce,—is an arbitrator of the London Chamber of Arbitration, Guildhall, and a familiar figure on 'Change. His elder son Mr. Alan Francis is being trained to succeed him, and with that object in view is now attending the School at the Square.

• • • • •

MR. WILLIAM HENRY FRANCIS (Managing Director) was also educated at the City of London School, and commenced his business career with a Chemical Broker in Mincing Lane. He afterwards went as a pupil for 2½ years to Mr. T. P. Gostling of Diss, and then entered on a course of studies at Bloomsbury Square, but left before passing the Minor Examination as his services were needed in the laboratory at 5 Coleman Street. From there he passed the Minor, and afterwards went through all the departments of both warehouse and counting house, before he was admitted into partnership. Since that time he has devoted himself to the general supervision of the warehouse. Some few years ago he did good work in conjunction with Mr. Charles Umney on the Railway Rates Commission. He takes great interest in the parochial work of the District, having acted for some

time as Warden of St. Saviours, Southwark. He is a member of the Pharmaceutical Society.

• • • • •

MR. W. A. H. NAYLOR after his preliminary experience of pharmacy in Horncastle, entered the school at Bloomsbury Square, and at the end of the session 1875 carried off the silver medal for Chemistry and Physics, and the bronze one for Practical Chemistry. After passing the Major Examination he entered the wholesale as an assistant Chemist, and was subsequently Chemist to Messrs. Corbyn & Co. For the past 18 years he has acted in the same capacity with the House of which a year ago he was made a Director. Apart from his many contributions to pharmaceutical research, he served for a short time on the Board of Examiners at the Square. He is an F.I.C. and F.C.S., a member of the Pharmaceutical Society, and the Senior Honorary General Secretary of the British Pharmaceutical Conference.

• • • • •

MR. RICHARD J. REYNOLDS received his early education at Bedford Modern School, with a view to graduating at one of the Universities. It has always been a disappointment to him that illness resulting from overwork, interrupted his studies, and rendered their resumption in this direction impossible. Abandoning the idea of a professional career,



MR. W. H. FRANCIS,  
*Managing Director.*

and having a leaning towards pharmacy, he was apprenticed to Dr. Robinson of Dewsbury, and subsequently in 1876 he entered a Wholesale house in the Midlands. Five years later he accepted a position with Messrs. Hearon, Squire & Francis, as their representative in the Midland and North Western Counties. Now that he is one of the Directors of the Company he still travels over his old ground, where he is well known to a large circle of friends.

• • • • •

MR. JOHN B. RIDGWELL, (Secretary), was engaged by the late Mr. Squire, thirty years ago as junior Ledger Clerk. His genius for figures, neatness, courtesy, and whole heartedness in his work, were early recognised by his employers, and his advance was rapid and assured. For many years he was responsible for the correct keeping of the accounts of the old firm, and he has enjoyed the confidence and friendship of two generations of the Messrs. Francis; while, as a Director and the Secretary of the Company, his special portfolio continues to be the offices, he also keeps a watchful eye on the general accounts. As a former volunteer, he has received the long service medal. He is also a musician of no mean order, nature having endowed him with a fine tenor voice which he has carefully trained. For many years he was Choirmaster and Organist at the Parish Church in his native village, and is now Choirmaster and a Churchwarden at the place in which he resides,





Mr. W. J. ROGERSON, *Director*



Mr. R. J. REYNOLDS, *Director*



Mr. W. A. H. NAYLOR, F.I.C., F.C.S., *Director*



Mr. JOHN B. RIDGWELL, *Director and Secretary*



Mr. RICHARD SHARRAH, *Director*

MR. WILLIAM J. ROGERSON is a native of Bradford, Yorks., and received his early training in his father's well appointed pharmacy in that town. At the expiration of his apprenticeship he came up to London, and shortly afterwards engaged himself to the firm with which he has been so happily associated for the long period of 37 years. After passing through the more important departments at the warehouse, he succeeded, in 1870, the late Mr. McCulloch as town traveller. A little later he became the firm's representative in the Southern and Eastern Counties, and from 1874 until 1888, he took continuously the North Eastern Journey, and during that time resided at Nottingham. On the retirement of the late Mr. Squire, he obtained a part interest in the business, and in 1888, returned to London to resume his former duties, and assist in departmental work. He is well-known by a large number of present day pharmacists, and his advice is sought and appreciated by them. He is an old Freemason, being a pastmaster of the Lodges—Annesley No. 1435 and Galen No. 2394, and for two years was Director of Ceremonies for the province of Notts. He is the oldest P.Z. of the Annesley Chapter, and P.S.N. of the same province. He was also one of the founders of the Galen Lodge, its first Director of Ceremonies, and fifth master.

MR. RICHARD SHARRAH hails from Hull, is a typical Yorkshireman, and proud of the place in which he was born. He served an apprenticeship of five years with the late Mr. Francis Earle of Hull, where he learnt the art of dispensing prescriptions, and in addition acquired much useful knowledge in the making of pharmaceutical galenicals, the preparation of Veterinary Medicines, and of the mixed pharmacy that obtains in an agricultural district. While still in his teens, he was imbued with the idea that to travel for a Wholesale House would best accord with his tastes and the bent of his energies. Twenty-five years ago the opportunity was afforded him of gratifying his ambition. He gladly availed himself of it, and commenced by taking the town round as the representative of the House of which 12 months ago he was made a Director. After a brief period he was transferred to the Southern and South Western Counties Journey, and over this ground he continues to travel with much pleasure to himself, and profit to his House. He is an earnest Mason of more than 20 years standing and a Member of the Pharmaceutical Society.













# THE CHEMIST & DRUGGIST SUPPLEMENT.

LONDON! 42 CANNON STREET E.C.  
SATURDAY, JULY 28, 1900

Businesses for Disposal  
Businesses Wanted  
Premises to Let  
Auction Sales

**ALSO EXCHANGE COLUMN.**  
For Bargains see end of this Supplement.

Partnerships  
Situations Vacant  
Situations Wanted  
Miscellaneous

A Copy of this Supplement is inserted in every number issued of "The Chemist and Druggist."

## CHEMISTS' TRANSFERS.

# MESSRS. ORRIDGE & CO.

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May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

**VENDORS** have the advantage of Messrs. O. & Co.'s direct attention and advice as to value without any additional fee

**PURCHASERS.**—Applicants are invited to forward a statement of their requirements, which will be notified *free of charge* in a classified register kept for that purpose.

**VALUATIONS.**—Valuations having always been a prominent feature, Messrs. Orridge & Co. trust that the *lengthened period* during which they have enjoyed the confidence of the profession will be regarded as a sufficient proof of the sincerity of their endeavours to conduct these transactions in an honourable and straight-forward manner.

1.—£400.—**LONDON, N.W. (Vendor retiring).**—Old-established Family Retail and Dispensing business, held by vendor 37 years; returns, present rate, between £350 and £400; capital opening for modern trading; corner shop; new lease will be granted; price £250, less than value of stock and fixtures.

2.—£200.—**LONDON (Western Suburb).**—Very old-established Business; returns, present rate, £200 per annum, but can be largely extended by an energetic man; commodious shop, corner position; house contains 8 rooms, &c.; rent £45; price £130; would suit young beginner.

3.—£2300.—**NORTHERN HEIGHTS.**—Good class Dispensing and Retail Business, well situated in close proximity to busy railway station; returns average £2300 per annum; *net profit* £400; modern fitted pharmacy and good working stock; commodious residence, held on lease; terms valuation of stock and fixtures, and premium to be arranged.

4.—£500.—**LONDON, S.E. (good business thoroughfare).**—Ready-money Business; returns about £500 yearly; *profit* £236; vendor being desirous of taking over his father's business in the country is prepared to sell for valuation of stock and fixtures; no goodwill required.

5.—£450.—**LONDON, N. (Death vacancy).**—Old-established Business; middle-class; returns about £450, *all profitable business*; well-fitted, attractive shop; convenient house, easy rental; valuation of stock and fixtures only required; late owner held the business 20 years.

6.—£1300.—**LONDON, N.W. (Main road).**—Dispensing and Retail Business, with small Mineral-water manufactory attached; returns about £1300; *net profit* £500; handsome shop and good residence; valuation and premium for goodwill to be arranged.

7.—£900.—**LONDON, N.W.**—Dispensing and Retail Business; returns £900, *gross profit half*; handsome pharmacy and good stock; very nice residence, held on lease; about £800 required; vendor retiring.

8.—£900.—**HOME COUNTY (Market Town).**—Very old-established Business, situated in the Market Place; returns nearly £900, *net profit* £400 (proof given); vendor will grant a lease for 21 years; full investigation invited; price £750.

9.—£1500.—**WEST OF LONDON (Small Market Town).**—Well-established Business; returns between £1400 and £1600, *net profit* nearly £500; attractive shop, handomely fitted; good working stock; convenient residence, with nice garden attached; about £1250 required; part could remain to suit purchaser.

10.—£1200.—**SUSSEX (Rising Town on South Coast).**—Good-class Dispensing and Retail Business; returns last year £1200, *with excellent profits*; the shop is attractive, is well fitted, and is situated in one of the principal streets; modern house, sea view; price £600.

11.—£850.—**SOUTH WALES.**—Shipping and Family trade; returns last year nearly £850; *profits good*; convenient residence, private entrance; price about £500.

12.—£1000.—**MIDLANDS.**—Family Retail and Dispensing Business; returns last year £1000, *with excellent profits*; modern fitted shop, and good stock; comfortable residence; rent £50; price £750; part can remain to suit purchaser.

13.—£300.—**KENT (small town).**—Neglected Business; returns under Assistant nearly £300; could be doubled by the attention of a principal; nicely-fitted shop; small residence; price about £200; vendor will grant a lease.

14.—£450.—**BERKS (good business town).**—Dispensing and Retail Business; returns £450; small appointment attached, giving an income of £100 yearly; profit from business £216; double-fronted well-fitted shop; convenient house, private entrance; about £500 required.

Particulars of any of the above will be furnished on application.

**N.B.—NO CHARGE TO PURCHASERS.**

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION.  
Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms where business of a confidential nature requires the special attention of a London Agent.

**SPECIAL NOTICE.**—Messrs. ORRIDGE & CO. have a large number of Businesses for Sale suitable for Gentlemen with small capital, from £200 to £500.

**ORRIDGE & CO., 56 LUDGATE HILL, LONDON, E.C.**



# F. J. BRETT,

## VALUER, LEICESTER,

### 37 WATERLOO STREET.

*References to principal London and Provincial Wholesale Houses, also to numerous clients throughout the United Kingdom.*

### BUSINESSES THOROUGHLY INVESTIGATED.

**VALUATIONS.**—The long and varied experience of F. J. BRETT in Valuing all classes of Businesses throughout the United Kingdom, together with his ever-increasing connection, renders it desirable that you should secure his services, in order to have your interests well protected. Stocks carefully taken.

**£2,000 returns.—YORKS.**—Very old-established Wholesale and Retail, having a large connection and demand for Flavouring Essences for Mineral-water manufacturers; valuation about £700.

**£900 returns.—STAFFS.**—General Retail; in present hands 25 years; energetic man could largely increase; good house and convenient premises; valuation £400 to £500.

**£880 returns.—LAKE DISTRICT.**—General Light Retail, with fair Dispensing and Prescribing; good house, garden, &c.; price £500

**£660 returns.—SHROPSHIRE.**—Light Retail; good Prescribing and own preparations; nice house; rent £35; price £450.

**£600 returns.—LANC.**—Medium-class Retail, with no near opposition; house fair; rent £2; price £300.

**£900 returns.—POPULAR KENTISH SEASIDE RESORT.**—Light Retail, Dispensing, &c.; net profit £300; good house and shop; price £600.

**£900 returns.—WESTERN CITY.**—Dispensing, Light Retail, and own preparations; good position; well-fitted shop; good house; price £600.

**£775 returns.—LONDON, N.**—Exceptionally profitable Retail, as half of returns are in own preparations; situation good for up-to-date trade; price £650.

**£1,500 returns.—MIDLANDS.**—Very old-established good-class Retail, with very commanding shop; net profit £400 to £500, without appointment which yields over £100 per annum; price £1,500, or goodwill, stock, and fixtures at valuation.

**£900 returns.—MIDLANDS.**—Very old-established Pharmacy, with half of returns in own specialties; net profit £300; price £1,200.

**£1,400 returns.—WESTERN CITY.**—Established over a century; shop very large, and splendidly fitted; good house; valuation about £1,000.

**£1,000 returns.—NORTHAMPTONSHIRE.**—Good medium-class Retail, with family connection, in fine position of important town; vendor selling in consequence of ill-health; valuation about £700.

**£2,000 returns.**—One of the handsomest Pharmacies in the kingdom, in fine position of important Midland town; the trade is almost entirely of very profitable and good-class Retail; sale of patents small; this is admirably adapted to one or two men accustomed to good-class trade; the returns could, with personal attention, be easily made £3,000.

### BUYERS—IMPORTANT.

Vendors of Retails or Stores, doing from £2,000 to £10,000, can at once hear of a buyer who prepared to invest from £2,000 to £4,000 in suitable concerns.

## BERDOE & CO.

CHEMISTS' TRANSFER AGENTS AND VALUERS,  
35 JEWRY ST., FENCHURCH ST., E.C.

Established 1870.

**VALUATIONS** are in all cases conducted by a member of the firm, and the most careful attention to details, which is so essential, may be relied upon.

1.—**BATH.**—Good-class Retail and Dispensing Business; best position in the City; low rent; returns £2,200, formerly were £5,000, and can be done again; price £1,500 or reasonable offer.

2.—**BERKSHIRE.**—Banks of Thames; select Retail and Dispensing Business; returns £450; Post Office pays £100; net profit £250; same hands nearly 20 years; price £500.

3.—**YORKSHIRE.**—Inland health-resort; good-class Retail and Dispensing Business; returns £850 with good profits; 3,000 prescriptions dispensed last year; price £750.

4.—**MONMOUTHSHIRE.**—Good-class Family Retail and Dispensing Business; returns over £2,000, net profit nearly £500; excellent residence, low rent; price £1,300.

5.—**LANCASHIRE.**—Totally unopposed Business; returns £500, and making excellent profits; low rent; shop is well fitted and stocked; price £400.

6.—**BUCKS.**—Unopposed Retail and Prescribing Business; returns £6 weekly, ought to do £10; expenses nominal; good house and garden; price £200; thoroughly reliable.

7.—**WESTERN COUNTY.**—Ready-money Retail, Dispensing, and Prescribing Business; returns £1,500; net profit nearly £500, rent £45, on lease; good house; price £900

8.—**SURREY (Banks of Thames near town).**—Good-class Retail and Dispensing Business; returns £800, capable of being increased; good house, small garden; price £t25.

9.—**LONDON, N.**—Good main thoroughfare; returns £1000; net profit £300; good house, handsomely-fitted shop, and well stocked; price £750.

10.—**LONDON, N.**—Retail and Prescribing Business, under management; returns £10 weekly; well fitted and stocked shop; price £350, of which £250 could be paid by instalments.

### UP-TO-DATE CHEMISTS

Should turn to page 36 in this year's CHEMISTS' AND DRUGGISTS' Diary, where we give two reasons why all Chemists should have an annual "STOCKTAKING."

## JUDD & MANNERS

CHEMISTS' VALUERS,

Transfer Agents and Accountants,

76 CANNON STREET, LONDON, E.C

**MIDLAND CITY.**—Good-class Retail and Dispensing for immediate Disposal, under peculiar circumstances, which will be explained at interview; returns £1,300; can be bought for valuation of stock and fixtures we specially recommend this. [110]

**BERTFORDSHIRE (26 miles from London).**—Capital unopposed village Business (neglected); returns nearly £500 at good prices; small but convenient house with good garden full of fruit trees; rent only £15 on lease having 13 years to run. [2]

**MIDLAND MANUFACTURING TOWN.**—Retail and Dispensing Business with Wines; returns over £1,000, under manager; rent £62, on lease; lock-up shop; valuation of stock and fixtures only required; capable of considerable increase. [3]

**ESSEX (20 Miles from London).**—Light Retail, Dispensing, and Prescribing Business, with exceptional opportunity for Dentistry to be added; fine, bold double-fronted shop in main road, near station; good house with modern conveniences, bathroom, &c.; returns about £1,200; rent £60, on lease with 17 years to run; price £1,000, or offer. [4]

**HAMPSHIRE.**—Small Retail and Prescribing Business, giving a clear profit of over £100 a year; value of stock and fixtures only wanted; small house and garden; rent only £26, on long lease. [6]

**MIDLAND TOWN.**—Cash Retail, Dispensing, and Prescribing, semi-Store lines; returns over £1,200 yielding a clear income of £32 hand-some double-fronted shop, nicely fitted, and well stocked; good domestic accommodation, with modern conveniences, bathroom, &c. moderate rent, on lease; every invitation; will accept value of stock and fixtures for prompt transfer. [7]

**GLOUCESTERSHIRE.**—Country Retail, Dispensing, and Agricultural, with own Proprietaries in good demand; returns about £750, yield 33 per cent. clear profit; splendid 10-roomed house; rent only £45; on lease to be granted; vendor will put in new shop-front free; price £450. [8]

**LONDON, S.E.**—Main market thoroughfare; neglected and let do owing to serious illness, and capable of immediate increase; returns about £1,200, yielding over £300 net profit; moderate rent, with good lease; price £900, or prompt reasonable offer; illustrates the sole cause of sale. [9]

**FASHIONABLE SEASIDE TOWN (North of England).**—First class Retail and Dispensing Business; under manager for some who could be easily doubled; returns just over £1,000; splendid position on site station, in good business town; price £900, or reasonable offer; no sell to close estate. [1]

Particulars of either of the above free on application.



# THOS. TOMLINSON & SON

Chemists' Transfer Agents and Licensed Valuers,

9 NEW CANNON STREET, MANCHESTER.

*Valuations conducted with careful attention to detail.*

Our system in disposing of Businesses for clients is to keep the matter as private and confidential as possible, avoiding publicity and "curiosity" inquiries, in many cases we having sold to the applicant on our books first notified, we knowing just the class of concern he required and was waiting for.

Buyers are advised to place their names on our books (for which no charge is made), stating their requirements, as the best businesses are sold quickly; they by this means get first call upon a suitable concern being placed in our hands, provided we have not one in hand at the moment meeting their wants.

**INVENTORIED STOCKTAKINGS FOR ASCERTAINING PROFIT OR OTHER PURPOSES.**  
**Terms on Application.**

Telegraphic Address—"TOMTOM."

Telephone—NATIONAL 3965.

**J. SHACKLADY,**  
CHEMISTS' VALUER AND ACCOUNTANT  
56 Hanover Street,  
LIVERPOOL.

## TO SUBSCRIBERS ABROAD.

*We desire particularly to draw the attention of Colonial and Foreign Subscribers to the fact that in cases where they require partners, agents, or assistants, or wish to sell their businesses, an advertisement in this Supplement, placed in every copy of "The Chemist and Druggist," should be the readiest means of helping them to attain their object. The tariff for such announcements is given under the appropriate headings in the Supplement. Instructions and remittances can be sent to us direct or through the advertisers' correspondents in this country.*

## BUSINESSES FOR DISPOSAL

3s. 6d. for 50 words or less; 6d. for every 10 words beyond.

**BIRMINGHAM (near).**—In a prosperous neighbourhood; a first-class Retail Business, with Gilbey's Agency attached; profits about £260; price £1,300. 244/17, Office of this Paper.

**BOLTON (Lancashire).**—Death cause of sale: valuable centrally-situated Chemists' and Druggists' Business for immediate Disposal; established over 50 years; a number of exceedingly profitable Specialities included in the sale; first-class fittings, stock, &c.; has been in hands of late proprietor over 30 years. Apply, 138 Bradshawgate, Bolton.

**BURTON-ON-TRENT.**—On and after September 29 next, profitable Cash Retail and Prescribing Business; good house, corner shop and warehouse; improving neighbourhood; returns over £400, much neglected; could quickly double with energetic management; owner retiring; valuation £250; rent £35. Street, Chemist, Burton-on-Trent.

**HOME COUNTY.**—Family, Retail, and Dispensing Business, situate in the main street of a good commercial town; returns last year £684; profits half; the shop is fitted in mahogany; stock good, above the average; nice residence; rent low; an immediate purchaser will be dealt with liberally. Apply, "Alpha" (144/12), Office of this Paper.

**HULL.**—For Sale, well fitted and stocked Chemist's Shop, standing at corner of main suburban road; price of stock and fittings; attached is a very convenient house with all modern conveniences; rent £45 per annum. Address, Charles D. Brighthouse, Chemist, Beverley Road, Hull.

**LANCASHIRE.**—Mixed Retail and Prescribing Business, in small town, at valuation of stock and fixtures; returns over £800; rent £45; large shop, well fitted; convenient house, with large garden. Apply to "Mag. Sulph." (241/21), Office of this Paper.

**LEEDS.**—Chemist's old-established Mixed Business, main thoroughfare; returns £700; Patents £50 per annum; exceptionally good profits; large house and shop, recently re-fitted; splendid opening for qualified man; reasonable price. Full particulars, L. H. W., Raimes & Co., York.

**LEEDS.**—Small compact Business for Sale in good thoroughfare, doing £4 per week under unqualified man; could be increased by one with qualification and knowledge of Dentistry; good fittings, stock, &c.; rent £21; price £160, or valuation. Apply, Hirst, Brooke, & Hirst (Lim.), Leeds.

**LONDON SUBURB.**—Profitable Retail Dispensing and Prescribing Business; excellent position in main road of rapidly-growing district; attractive shop, well fitted and stocked; low rent, valuable lease; returns about £650 per annum; price £530; satisfactory reasons for disposal. Apply, Mr. Piper, c/o Messrs. Barron, Harveys & Co., Giltspur Street, London.

**LONDON SUBURB.**—Small Cash Drug Stores in thickly-populated district; price about £300; capable of large increase, and splendid opening for Dentistry. Hastie & Cook, Estate Agents, 1 Eton Terrace, Church Road, Willesden, N.W.

**LONDON, W.**—Small Business for Sale, returning £200 under management; principally pennyworths; few patents; scope for good increase; house could be let off. Apply, 241 8, Office of this Paper.



## BUSINESSES FOR DISPOSAL

(continued).

**LONDON, N.W.**—For immediate Disposal, an old-established Dispensing and Light Retail Business, yielding a net income of nearly £300 per annum; large and handsome Pharmacy, well stocked; large and convenient house, with side and back entrances and small garden; the business is capable of much increase by personal attention of an up-to-date Pharmacist who has had experience in Photographic goods. Address, "Faraday" (246/4), Office of this Paper. N.B.—Only cash purchasers entertained.

**MIDLANDS.**—Small Prescribing and General Business for Sale, doing, under inferior management, £10 to £12 per week; good living, and capable of extension; rent £26; well stocked and fitted; price £200. 244/1, Office of this Paper.

**NORFOLK.**—Light Country Retail, Dispensing, and Prescribing Business for Sale; returns last year £1,252; net profit £337; convenient 9-roomed house, with warehouse and garden; rent only £30; 17 years' lease; price £650, including valuable stock; exceptional chance for anyone wanting a country life. "Ferrum" (246/25), Office of this Paper.

**SHEFFIELD.**—For Disposal, good profitable Mixed Drug Business; old-established; returns £600 capable of great increase; corner shop, good position; rent £35; good house, at present let £19 10s.; owner retiring; introduction given; price £300; well stocked. Apply to Mr. Colton, 104 Addey Street, Sheffield.

**SHEFFIELD.**—Light Retail Business for immediate Disposal; Photo side-line; well situated in rapidly-growing district; returns £600; plenty of scope for increase; good house, rent moderate; price about £350; open to offer; splendid opening for Dentistry. 243/18, Office of this Paper.

**SHEFFIELD.**—Compact Branch Business for Disposal, in pleasant suburb; established over two years; new fittings and saleable stock; returns £350, increasing; opening for Dentistry, &c.; small house, low rent; satisfactory reason for disposal; cash price about £200; offer considered. M. P. S., c/o Messrs. Raimes & Co., York.

**SHROPSHIRE.**—£170 cash; rare bargain, through ill-health; genuine Retail and Prescribing Business; old-established, doing £6 a week; good prices; no opposition; populous neighbourhood; large industries; good house and garden, low rent; only wants seeing. "Ferri" (244/11), Office of this Paper. No Agents.

**SOUTHPORT.**—Old-established Chemist's and Dentist's Business for immediate Disposal; well-fitted shop and good warehouse; house very good; valuation or offer; photo of premises can be sent. Address, T. B. (224/2), Office of this Paper.

**SURREY.**—A genuine, Mixed Country Business; steadily increasing; profit last year £245; rent £30; price £450. Apply, "Nemo" (128/34), Office of this Paper.

**WARWICKSHIRE (Market Town).**—An old-established good-class Country Retail and Dispensing Business for Sale, through serious illness; returns £1,250; very good profits; handsome shop and fairly good house, held on long lease at moderate rent; price £950, or would sell by valuation if preferred. Apply, "Warwick" (246/16), Office of this Paper.

**A BARGAIN.**—To immediate purchaser, £1,000 (£650 cash) will purchase a Chemist's and Wines and Spirit (free) Business, including stock, fixtures, fittings, trade utensils; everything but book-debts; estimated value of stocks, fixtures, &c., about £1,200; returns, 1899, about £1,400; reason for selling, owner gone into other trade; business situated centre main street, unrivalled position; rent £90; sole owner and maker of Hornby's Magic Cordial and Hornby's Musk Lavender (original), for which there is a good wholesale and retail trade; purchaser has option of Branch (spoken for if not required) for £250 (£100 cash); estimated value of stock, &c., £300; returns about £450; rent 15s. per week (inclusive of rates), central position.—W. Hornby, Talbot Hotel, Whitby, Yorks; or business premises, 63 Ormonde Street, Jarrow-on-Tyne.

**A FIRST-CLASS** Dispensing and Family Retail Business for Sale; old-established; satisfactory reasons for disposal. For price and particulars, apply "Beta" (97/46), Office of this Paper.

**A** old-established Mixed Retail Business, capable of much development, in a densely populated, improving district; lock-up shop; would make a good Branch shop; owner retiring; an immediate cash purchaser will be liberally treated. Robt. Little, Chemist, Caldegate, Carlisle.

**CHEMIST'S AND DENTIST'S.**—All-cash Business in South Wales; returns exceed £1,000 (£300 Dental); a growing business in a rapidly-improving district; net profit over £250; good house and garden; value of stock and fixtures £450; inclusive price £700 cash. Apply, "Mumbles" (239/8), Office of this Paper.

**DRUG** Stores for Sale; suburban market thoroughfare; large population; lease, good will and fixtures, £100; stock optional; rent £50. Address Mr. Harrison, 1 Deacon Street, Walworth, S.E.

**EXCELLENT** opportunity.—Advertiser, having a small Wholesale, to which he desires to give whole time, offers his old-established Light Retail and Dispensing Business at valuation; splendid improving position, in centre of large Manufacturing district; smart modern man with capital could build up big business; valuation about £750; Partnership entertained. Further particulars to bona-fide applicants, giving references, 244/4, Office of this Paper.

**TO** Chemists and Dentists.—A rare chance.—A Retail Business, with Dental Practice and small Wholesale combined; must be sold, owing to age and ill-health of owner; going concern; what offers? no reasonable offer refused; every particular on application. J. A. L., Church Place, Leytonstone, N.E.

**£80.**—LONDON, E.—Working Suburb; Prescribing and Retail; wants smart qualified man who would find excellent ground-work for building up a capital business; nice shop and dwelling in main road; offered under exceptional circumstances at above absurd price. Those meaning business address, "Sacrifice" (245/6), Office of this Paper.

**£650** cash.—North of England (seaport town).—General Retail and Prescribing Business, in populous district; large shop, with house attached; present returns over £800, increasing; net profit above 30 per cent.; any amount of scope for Chemist used to a brisk Drug Store trade. Apply, "Antipyrin" (240/30), Office of this Paper.

**£800.**—SHEFFIELD.—Good-class Retail, Dispensing, and Prescribing Business, returning £800, steadily increasing; well stocked and in excellent position in residential suburb; good and convenient house, with plenty of warehouse room, held on long lease. Full particulars on application to M. W. J. (143/35), Office of this Paper.

## BUSINESSES WANTED.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond.

**ADVERTISER** wishes to purchase a genuine Light Retail and Dispensing Business in the South of England returning about £700 per annum; one with scope for increase preferred. Address, W., 12 St. Stephen's Road, Bayswater, London, W.

**WANTED** to purchase a good-class Retail and Dispensing Business, returning £2,500 to £3,000, with a net profit of at least £500 yearly; cash ready; strict investigation required, and references exchanged. "Cash" (246/28), Office of this Paper.

## SALES BY AUCTION.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond

ROBINSON STREET, DEWSBURY.

TO CHEMISTS.

**FOR** Sale, by Auction, the whole of the Stock, Fixtures, large Oil Cisterns, Platform Scales, and Trade Effects of the late A. Foster, Chemist, on Thursday, August 9, at 11 o'clock prompt. Sam Spedding, Auctioneer, &c., Offices, Tithe Barn Street, Dewsbury.

## FOR SALE.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond.

**TO** be Sold, for £14, Utensils used in Pill-making, Bracher's Powder Mixer and Sieve, Pfeleiderer's Pill-masser, 2 Pill-pipers 2 and 4 grain, Pill-cutter, for hand or steam, will cut 60 pills. W. Gabites, 51 Upper Warwick Street, Liverpool.

## TO LET.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond.

**BRADFORD.**—Finest Shop in the West Riding, to Let; lately occupied by Worsley's, Limited; in one of the busiest thoroughfares; 3,000 yards floor area; or could be divided; also basement, with 1,500 yards area; electric light; very suitable for Cash Chemist or Drug-store; immediate possession. Apply, Henry Lingard, Bradford.

**SHOP** and House of 7 rooms and bathroom, newly erected, in Queen's Road, Hoe Street, Walthamstow; good opening for Chemist and Druggist; rent £40. Apply, H. Ford, James Villa, Alexandra Road, Walthamstow.

**SHOP** in Hampton Road, Twickenham; excellent position for Chemist, between high-class baker and grocer; no other within a mile; only one to Let in block of four; front put in to suit tenant; 6 good rooms, bath (h. and c.), modern conveniences; rent £40. Weekes, Hampton Road Stores, Twickenham (Strawberry Hill Station).



## PARTNERSHIPS.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond

**EXPERIENCED** Chemist, with capital and Minor qualification, aged 36, desires Partnership in South African Drug Business; satisfactory references essential. "S. Africa" (238/17), Office of this Paper.

## APPRENTICESHIPS.

**A YOUTH** wanted as Apprentice to the Drug business; an exceptional opportunity for acquiring a thorough knowledge of it; one who has passed the Prelim. exam. preferred; outdoors or indoors. Apply, A. Shepperson, Chemist, Swineshead, Lincs.

## SITUATIONS OPEN.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond.

*The Publisher of "The Chemist and Druggist" wishes it to be understood that he is not in any way responsible in respect of Advertisements answers to which are to be sent to this Office.*

*Assistants applying for any of the Situations advertised below are recommended in no case to send Original Testimonials. If they send Photographs or any Documents which they wish to have returned, a Stamped Addressed Envelope should be enclosed.*

Advertisers whose Announcements appear under this heading can make arrangements to see applicants for the situations at our Offices, by giving a few days' notice to  
**THE PUBLISHER, 42 Cannon Street, E.C.**

### RETAIL.

**ABERGAVENNY.**—Junior Assistant or Improver; outdoors; good hours; no Sunday duty. State particulars and salary required, H. Fryer, 1 Nevill Street, Abergavenny.

**ALFRETON.**—Junior Assistant (20-23), one just out of apprenticeship preferred, for good-class Country business; short hours; half-day holiday weekly; no night or Sunday duty; outdoors; pleasant neighbourhood. All usual particulars, photo if convenient, salary required, Houlton, Chemist, Alfreton, Derbyshire.

**BAKEWELL.**—Wanted, a qualified Assistant; outdoors; close 4 o'clock on Thursdays; no Sunday duty. Please state age, height, and salary required, to E. G. Carrington, Chemist, Bakewell.

**BARNSELY.**—Junior Assistant (2 kept), outdoors, unqualified, aged between 25 and 30, for General Mixed Business; weekly half-holiday; no night or Sunday duty. State age, experience, salary required, and give reference or references, Nash, Pharmaceutical Chemist, 2 Queen Street, Barnsley.

**BARRY (Cardiff).**—Wanted, about August 14, a good Junior Assistant; reasonable hours; very little Sunday duty; half-day weekly; no heavy work; good opportunity for an energetic man to earn commission in addition to a good wage. Apply, with usual particulars and photo (if possible), H. J. Gratte & Son, Barry.

**BATH.**—Wanted, a qualified Assistant by the end of August; must have been accustomed to Dispensing. Apply, with usual particulars, to Whiston & Co., Chemists, Bath.

**BIRMINGHAM.**—Special opening for smart Junior; good progress assured for steady man. Apply, with full particulars as to wages, &c., to 126 Corporation Street, Birmingham.

**BIRMINGHAM.**—Wanted, at once, for high-class Dispensing business, qualified Assistant, aged 24 to 28; indoors. Full particulars, height, salary required, to McIsaac & Co., 165 Hagley Road, Birmingham.

**BOURNEMOUTH.**—C. E. Bridge & Co. (Limited) require by August 7 a qualified Junior; indoors. Give all particulars on application. Store assistants not required.

**BRIGHTON.**—Assistant, about 23, accustomed to good-class Dispensing and Retail. State age, height, experience, and carte, to John Miller, 4 Victoria Road, Brighton.

**BRIGHTON.**—Wanted, an Assistant (indoors) for first-class Dispensing and Light Retail business; good Dispensing experience essential. Full particulars, with photo (to be returned), to Jeeves & Son, Brighton.

**BRIGHTON.**—Qualified Assistant, also Junior, for high-class Dispensing business; indoors. Apply, stating age, height, salary, and references, enclosing photo, if convenient (which will be returned), Kilby, Pears & Son, 16 Western Road, Brunswick Square, Brighton.

**BROMLEY (Kent).**—Smart Junior wanted; part-time; outdoors; suit Minor student. Winton, 17 Market Square.

**CAPE COLONY.**—Assistant, immediately; must be single, possess the Minor qualification, about 25 years of age, and have had good experience in a Country business; also a good and neat Dispenser; steady and sober habits indispensable; salary, 1st year, £140 per annum; 2nd year, £150; 3rd year, £160; sleeping accommodation provided or equivalent (outdoors), but to find own board; second-class passage paid out, conditional on a 3 years' agreement being signed. Address, "Cape," c/o Meers, Evans, Lescher & Webb, 60 Bartholomew Close, London, E.C.

**CHANNEL ISLANDS (Jersey).**—At once, Junior wanted, for about two months, perhaps permanency; travelling expenses paid; two others kept; must have been used to first class Dispensing and Retail. Apply, with photo, stating age, height, salary required (indoors), a so references, to F. G. de Faye, Chemist, David Place, St. Heliers, Jersey.

**CHESHIRE.**—Wanted, Junior Assistant, with Drug Store experience; outdoors. Full particulars to 243/16, Office of this Paper.

**CHIPPENHAM.**—Confidential Assistant wanted, aged about 23, for Drug, Grocery, and Wine and Spirit trade; counter and country journeys. Full particulars, references, age, experience, and salary, to John C. Coles, Chippenham.

**CITY.**—Wanted, smart man as Locum, for one month. Apply, personally only, Hay, 16 Queen Victoria Street, E.C.

**CLEVEDON.**—Assistant, about 23 or 24, with experience in high-class Dispensing and Retail. Full particulars to Hart, Pharmaceutical Chemist, Clevedon.

**CROYDON.**—Junior Assistant (outdoors) wanted, second week in August; salary and commission. Apply personally, or by letter stating full particulars, to the Manager, "Modern Pharmacy," 103-105 North End, Croydon, Surrey.

**DONCASTER.**—Junior Assistant or Improver, 20 to 21, for small Mixed Country business; indoors; half-day holiday weekly. Apply, with usual particulars as to height, salary required and photo (to be returned), to W. W. Smith, Chemist, Market Place, Doncaster.

**DONCASTER.**—M. H. Stiles, Pharmaceutical Chemist, requires a qualified indoor Assistant, who has been accustomed to a good-class Family business; aged about 23. Apply, with full particulars of age, height, salary, previous experience, &c., and enclose portrait (to be returned).

**DORKING.**—Wanted, Part-time Assistant, used to a good-class business, for a few weeks. F. W. Doubleday, Dorking.

**EXETER.**—Broom & Reid require, early in August, Junior Assistant, about 20, of gentlemanly appearance and good address; must be able to Dispense well. Please give full particulars, enclosing photo (to be returned).

**EXETER.**—Wanted, at once, gentlemanly Assistant; indoors. Please state salary and full particulars in first letter, Wynne Tighe & Son, Chemists, Exeter.

**FAVERSHAM.**—Junior Assistant, by about August 24; not qualified; accustomed to Retail and Dispensing; hours easy; no Sunday duty. Apply, stating age, salary (indoors), when disengaged, enclosing references and photo (returnable), to E. Jenkins, Chemist, Faversham, Kent.

**GLOUCESTER.**—Junior Assistant wanted, in Light Retail and Dispensing business; knowledge of Photography preferred; outdoors. Apply, H. Hargreaves, The Cross, Gloucester.

**GUERNSEY.**—Junior Assistant; outdoors; young, active, and industrious; one just out of his apprenticeship suitable; short hours, no Sunday duty; abstainer preferred. Apply, stating age, reference, and salary required, with photograph, to Henry J. Cumber, Pollet, Guernsey.

**GUILDFORD.**—Junior required immediately (outdoors), in a Light Retail and Dispensing. Apply, with full particulars as to age, references, salary required, &c., to W. Jacobs, Chemist, High Street, Guildford, Surrey.

**HASTINGS.**—Immediately, Assistant, qualified, and accustomed to good-class business; permanent berth for suitable man. Apply, with carte and usual particulars, Jameson, 1 Harold Place, Hastings.



## SITUATIONS OPEN—cont.

## RETAIL—continued.

**HELMSLEY.**—A qualified man wanted for Helmsley, Yorkshire moors. Apply, stating age, experience, and salary, to B. Casdale (Limited), York.

**HIGH WYCOMBE.**—Qualified Assistant; outdoors. State salary required, and all usual particulars, Young, Chemist, High Wycombe, Bucks.

**ILFORD.**—Wanted, by August 10, Assistant, for Dispensing and Counter; board in; sleep out. Address, with usual particulars, to Mr. Skat, The Pharmacy, Ilford.

**KING'S NORTON (Near Birmingham).**—Unqualified Assistant wanted, immediately; aged about 21; outdoors; half-day weekly from 2 o'clock; Sunday duty only 2½ hours every third week; business Light Retail. Send full particulars, age, height, references, and salary, to W. Johnson, Chemist, The Cotteridge, King's Norton, near Birmingham.

**LANCASHIRE.**—Assistant, accustomed to Dispensing and quick Store trade. Full particulars and photo to E. Woodward, 95 Fishergate, Preston.

**LEICESTER.**—Branch Manager (qualified) wanted; married; good, all-round experience; knowledge of Minor Dentistry and Photography preferred. Please give references, also state salary required (with house and gas free), to S. E. Butler & Son, Town Hall Lane, Leicester.

**LIVERPOOL.**—Qualified Assistant (22 to 24), good-class Dispensing and Retail. State age, height, salary, &c., to Strick, Pharmaceutical Chemist, Upper Brighton, Liverpool.

**LONDON, W.**—Indoors; Junior or Improver. Apply, with full particulars, to C. W. Brumwell, 118 Holland Park Avenue, W.

**LONDON, N.W.**—Part-time Assistant, for a good-class Dispensing and Light Retail. R. B. Betty, 1 Park Street, Gloucester Gate, Regent's Park, London.

**LONDON, S.E.**—Wanted, a qualified Manager, married preferred, to open a new business; salary, with unfurnished house, £3 weekly and percentage of profits. Applications in first instance, stating experience, ability, qualifications, age, &c. (references and testimonials can be investigated later), to be addressed to B. O. H. (241/1), Office of this Paper.

**LONDON, W.**—At once, Junior Assistant (indoors), with experience of West End business preferred. Apply personally, if possible, to Reece & Co., 168 Piccadilly, W.

**LONDON, S.E.**—Junior (about 21) wanted, during holidays, for a month, about first week in August. Apply, Frost & Harrison, 3 Eltham Road, Blackheath, S.E.

**LONDON, W.C.**—Wanted, at once, unqualified Junior, about 21 or 22; indoors; time for study; suit one entering for October examination. Apply, Turner, 20 Bury Street, Bloomsbury, W.O.

**LONDON, S.W.**—Junior Assistant (indoors); aged about 22; about August 11; accustomed to a good-class Retail and Dispensing business. Apply, with full particulars, references, &c., Jagg & Co., 127 Buckingham Palace Road, London, S.W.

**LONDON, S.E.**—Minor Student wanted, soon, Assistant, for light duties, to take charge of small select business; hours 8 to 8; no Sunday duty; comfortable home, and ample time for study; nominal salary only; unusual opportunity to enter Dental profession. "Chemist and Dentist," 2 The Pavement, Ladywell, S.E.

**LONDON, W.**—Wanted, immediately, an Assistant; indoors; qualified preferred; to a suitable man prospects of a share in the business. Apply, "Chemist," 21 Formosa Street, Maida Vale, W.

**LONDON, S.W. (8 Miles from City).**—Middle of August, an unqualified steady Assistant to manage small branch and put up stock; hours 8.45 to 9; 4 o'clock Wednesdays; alternate Sunday evening duty. Apply, with references, photo if possible, and salary required, to S. W. (244/40), Office of this Paper.

**LONDON, N.W.**—Junior Assistant wanted, second week in August, for up-to-date Cash business; salary and commission; outdoors. Apply personally or by letter, giving full particulars of age, height, experience, and salary required, to Manager, "Fitzjohn's Promenade," 265 Finchley Road, N.W.

**LONDON, W.**—Junior Locum wanted, from August 8, for six weeks. Apply to James Garner, 106 High Street, Kensington.

**LONDON, S.W.**—Assistant, smart and gentlemanly, capable of being left in charge of small Branch in West-end. Apply personally, to Fisher, 58 King's Road, Chelsea.

**LONDON, S.E.**—An Assistant for Drug and Photo. Material business; no Sunday duty; 4 o'clock Thursdays. M. Howell & Son, 81 High Street, Peckham, S.E.

**LONDON, N.**—July 30; active Junior, about 22, of good address, for modern business; outdoors. Apply, Talintyre, 144 Strood Green Road, Finsbury Park, N.

**LONDON, N.W.**—Reliable Junior wanted, in Light Retail and Dispensing business (indoors); comfortable home. Apply, personally if possible, or by letter with full particulars, to J. McKnight, 290 Euston Road, London.

**LONDON, N.W.**—Smart Assistant wanted, for Light Retail and Dispensing business; unqualified. A. Bevan, the Modern Pharmacy, 6 Dennington Parade, West Hampstead, N.W.

**LONDON, N.W.**—Qualified Assistant; indoors; aged about 22; must be a thoroughly reliable Dispenser, and have had good Counter experience; 2 kept. State salary required, height, and full particulars, and enclose carte if possible, T. F. E., c/o Messrs. Hearon, Squire & Francis, 33 Southwark Street, S.E.

**LONDON, S.E.**—Wanted, smart, qualified Assistant, to push middle-class business; comfortable home, salary and commission; opportunity to learn photographic branch. Letters only, to Frank, 41 Princes Square, Kennington, S.E.

**LONDON, W.**—Wanted, immediately, two good Junior Assistants, who are well used to brisk Counter trade and hard workers; salaries 35s. weekly; good references required. Apply, personally, if possible, Henry Squire, 61 Goudge Street, W.

**LONDON, W.**—Immediately, Assistant speaking French or Swiss, Assistant speaking French and German, in high-class Dispensing and Retail. Enclose photo and copies of references to Mellin, 48 Regent Street, W.

**LONDON, S.E.**—A reliable Assistant (outdoors); half-holiday weekly; no Sunday duty. Apply, with full particulars, C. Kibble & Co. (Lim.), Drug Department, 55 Broadway, Deptford, S.E.

**LONDON, E.**—Evening Dispenser required; Surgery hours 7 till 9 (outdoor). Apply, stating full particulars and salary required, to S. & Y., 413 East India Road, E.

**LONDON, S.W.**—Wanted at once, smart qualified Junior; indoors; comfortable home; easy hours; alternate Sundays; personal application only. Lovely & Co., Streatham Common, S.W.

**LONDON, N.E.**—Immediately, an Assistant, with knowledge of Photography preferred; also a Junior or Improver; no Sunday duty; off partly on Thursdays. Please call, or state terms, experience, &c., to Edmund's Drug Stores, 33 High Street, Kingsland, London, N.E.

**LONDON, W.**—Immediately, a competent qualified Assistant, aged about 25 (two kept) for a first-class Retail and Dispensing business. Apply to H. Cracknell, Pharmaceutical Chemist, 17 Craven Road, Westbourne Terrace, London, W. Telephone No. 6117, Paddington.

**LONDON, N.**—Wanted, immediately, competent Assistant (indoors), and capable of taking charge in absence of principal; good salary to suitable man; comfortable home; or good Locum would be entertained. Please call, or give full particulars, A. G. Felthouse, 30 Highbury Park, N.

**LONDON, W.**—Assistant; outdoors; good references essential; day's holiday weekly. Dodd's Drug Stores, 70 Tottenham Court Road, London, W.

**LONDON, E.**—Wanted, immediately, an Assistant; also Junior, to sleep in and dine out. Apply, giving full particulars, &c., to Arthur Laer, 151 High Street, Shoreditch.

**LONDON, S.W.**—Wanted, at once, part-time Assistant; indoors; with photographic experience preferred; capable of entire charge; can arrange 6 hours daily for reading. Apply, stating age, height, and usual particulars to Hall, 509 Fulham Road, S.W.

**MANFIELD.**—Assistant, for Light Retail; qualified preferred, with knowledge of Photographic trade; hours light, no night or Sunday duty. State age, salary, and usual particulars, enclosing photo (to be returned), Pegg, Chemist, Mansfield.

**NATAL (Durban).**—Assistant (outdoors), with Minor qualification; single; about 25; 3 years' agreement; salary £13 per month first year, £14 second, £15 third year; passage paid out. Address, W., 23 St. Mary Axe, E.O.

**PLYMOUTH.**—Junior Assistant, for Retail and Dispensing Business; only one kept; indoors; comfortable home. Full particulars with photo (to be returned) in first letter, E. T. Wood, Chemist, Stonehouse, Plymouth.

**READING.**—Part-time (to Minor Students and others); a few hours' light work daily; facilities for practical work; classes can be attended at Reading College; comfortable home; boating, bathing, and cricket close at hand; nominal salary. "Pharmacist," Caversham, Reading.



**RICHMOND, S.W.**—Wanted, about second week in August, an Assistant, about 20 to 24, with good Dispensing experience, for a high-class business; preference to one with a practical knowledge of the Photographic (developing, &c.) and Optical trade. Send particulars of age, height, salary (indoor), and enclose photo, Rex Blanchford, Chemist.

**SEASIDE (Lancashire)**—Unqualified Assistant wanted; capable of assisting in management; must be thoroughly trustworthy, energetic and obliging; Store experience preferred. Apply, stating age, height, experience, and salary required, and enclosing photo and references, 245/13, Office of this Paper.

**SHERBORNE**—Wanted, Assistant (Junior or Improver); hours 8 to 7, Saturdays 10; time for recreation, and close at 2 Wednesdays; easy and comfortable situation for one requiring such. State references and salary required to A. F. Burnett, Chemist, Sherborne, Dorset.

**SOUTH AFRICA (Healthy Town)**—Assistant required, for early part of March; must be thoroughly reliable, competent, and preference given to one with Wholesale experience; steady and sober habits are most essential; aged about 23; single, and of good health; Minor qualification; salary, £12 l.s. per month first year, £13 l.s. second year, £15 third year, payable monthly; without board, and outdoors; second-class passage paid out, with personal expenses on board; 3 years' agreement. Address, "South Africa," Messrs. Evans, Lescher & Webb, 60 Bartholomew Close, London, E.C.

**SOUTHPORT**—Junior Assistant, for good-class Retail and Dispensing business; knowledge of photo trade preferred, but not essential. Full particulars, to J. R. Cave, Dispensing and Photographic Chemist, Southport.

**ST. ANNE'S-ON-THE-SEA**—Indoor Assistant, about 22, of smart appearance and address, for first-class Dispensing business. Applicants, please state age, height, references, salary required, and particularly enclose photo, J. H. Taylor, St. Anne's-on-the-Sea.

**ST. JOHN'S WOOD**—Part-time vacancy offered to gentleman desirous of reading; light duties in good-class business, with the afternoon off for study, or, if desired, its equivalent in exchange once or twice weekly for evening classes. State usual particulars to G. Dauncey, 6 Nugent Terrace, St. John's Wood, N.W.

**SUTTON COLDFIELD**—Assistant wanted, to work up Branch Business with view to Partnership; capital not necessary; Ph.O. preferred; particulars on application with reference; must be a capable business man. Jones, Parade Pharmacy, Sutton Coldfield.

**SWANSEA**—Wanted, a good Junior, able to speak Welsh preferred. Send usual particulars, with references, to Evan Thomas, 188 High Street, Swansea.

**TORQUAY**—Competent Assistant required, for high-class Cash business; must be a good counterman, obliging, and of good address; practical knowledge of Photographic trade desirable. Kindly give in first letter full particulars of experience, age, height, salary (indoors), and enclose photo, Frederick March, 34 Fleet Street, Torquay.

**WALLINGTON**—Assistant, outdoors, about 24 or 25, chiefly for Dispensing; must have had good experience. Please state full particulars, W. T. Roberts, Chemist, Wallington, Surrey (about 10 miles from London Bridge or Victoria).

**WESTON-SUPER-MARE**—G. S. Ball, Pharmacist, requires an Assistant accustomed to good-class Dispensing, for 24 West Street. State full particulars, including salary required (indoors).

**WESTON-SUPER-MARE**—Wanted, for September holiday, Assistant. Apply, with usual particulars, to John Cooper, Pharmaceutical Chemist, Weston-Super-Mare.

**WILLENHALL**—Wanted, a Junior Assistant; outdoors; half-holiday weekly from 2 P.M. Apply, stating height, age, and salary required (with photo if convenient); in applying, please state when at liberty, William H. Walker, F.O.S. Chemist, The Pharmacy, Willenhall, Staffs.

**WINCHESTER**—Wanted, a reliable Dispenser as Locum Tenens for one month, from about August 10. Address stating age, references, and terms, to S. W. Joyce, 6 The Square Winchester, Hants.

**WINTON (Bournemouth)**—Active Junior wanted, aged about 19 to 22; indoors; total abstainer; enclose photo, to be returned. State experience had and salary required to Oumbar, Chemist, Winton, near Bournemouth.

**WOKING**—Wanted, good Junior; one just out of time preferred; good opportunity for gaining first-class Dispensing experience and General Retail; comfortable home; easy hours. Littleboy, Pharmacy, Woking, Surrey.

**YORK**—Junior or Improver wanted August 20; outdoor; must be quick and good salesman; no Sunday or Bank holiday duty; weekly half-holiday. Age, height, references, and photo to Brown, Chemist, York.

**A JUNIOR Assistant** wanted, at once; must have good references; required principally for Dispensing and to help with the books, 242/24, Office of this Paper.

**COMPETENT Assistant** (about 26) required for Counter and a little Dispensing, in good-class Store business; outdoors; easy hours, half-holiday weekly; must be thoroughly capable man, with unquestionable references; one seeking permanency preferred. Apply, "Manager," 5 Park Street, Walsall.

**EARLY** in August, a temporary Junior Assistant, for a month. Apply, Edwards, Chemist, Godalming.

**FOR China**—Wanted, by firm doing large business in the Far East, a thoroughly competent Assistant; qualification desirable but not essential; liberal salary to suitable man; four years' agreement; passage paid both ways. Address, "China," c/o Messrs. Horler & Sons, Mitre Square, E.C.

**GOOD opening** for a qualified Manager for large Store business; must be an exceptionally smart man, whose character will bear strictest investigation; to such a man a liberal salary will be given; only competent men need apply. "Chemist," Glenham, Northfield Road, King's Norton, Birmingham.

**JOHN BARKER & COMPANY (LIM.)**, Kingston, W., are in immediate want of an Assistant; hours 8 to 7; Saturdays 2 o'clock; no Sunday duty.

**JUNIOR**, in a good-class East Coast Dispensing business; one just out of apprenticeship not objected to; state full particulars, when disengaged. Apply, 247/1, Office of this Paper.

**LOCUM** wanted, for three or four weeks, to take charge of Branch; suit experienced Junior. Apply, stating terms, with references, to "M.P.S.," c/o Messrs. Rames & Co., York.

**ON** or about August 13, a competent Assistant; indoors; qualification not essential; early afternoon once a week. Apply, stating age, height, references, and photo (to be returned) to "Syphon," c/o Davy, Hill & Co., 64 Park Street, Southwark, London.

**QUALIFIED Assistant**, about 23 years of age, wanted for Coast town in Cape Colony; salary, first year £14 per month, second year £15 per month, and third year £16 per month; passage paid out. Apply, Lennon (Limited), 75 Leadenhall Street, London, E.C.

**QUALIFIED Assistant** required in good-class Cash Pharmacy; fair salary and reasonable hours; excellent prospects offered to really competent man. Apply, stating full particulars, to Day's Southern Drug Company (Limited), 80 Borough Road, S.E.

**QUALIFIED Assistant**, not over 25; must be good Counterman and well recommended. Apply, "Chemist," 18 Yerroury Road, Holloway, London, N.

**QUALIFIED Assistant** for Mixed business; able to Extract. Apply, with reference, Bennison, Chemist, North Ormesby.

**RETAIL Assistant** required (lady or gentleman); must be qualified; board in and sleep out; write stating age, experience, and salary required; busy locality, close to City. Write to F., 8 Birch Lane, E.C.

**UNQUALIFIED Assistant** required in London; reasonable hours; must be of gentlemanly appearance and address; good salary to suitable man. State usual particulars to "Phoenix" (241/15), Office of this Paper.

**UNIVERSITY COLLEGE HOSPITAL, W.C.**—Part-time Locum wanted, for about 6 weeks, from August 13. Apply to Head Dispenser.

**WANTED**, at once, a smart, energetic, trustworthy Assistant; must have the highest references; abstainer preferred; salary 45s. (outdoor); single. Apply, 243/35, Office of this Paper.

**WANTED**, an Assistant thoroughly well acquainted with the details of Photography. Enclose photo, state age, experience, and salary required, to A. (242/30), Office of this Paper.

**WANTED**, Dispenser, for Morning and Evening work at Surgery. "Medicus" (143/22), Office of this Paper.

**ST. MARY'S HOSPITAL, PADDINGTON, W.**

**WANTED** for the Dispensing Laboratory, a qualified man to make Pharmaceutical and other preparations, and to assist in the Dispensing; age not to exceed 25; salary £85 a year. Applications, with references, to be sent to the undersigned,

THOMAS RYAN, Secretary.

## WHOLESALE.

**BOOKKEEPER** and Invoice Clerk wanted by provincial house. Apply, 141/53, Office of this Paper.

**DRY Counter**—An Assistant required, at once, by a Wholesale house in the North of England. Address, giving full particulars as to age, salary, and experience, to 143/64, Office of this Paper.



SITUATIONS OPEN—*cont.*

## WHOLESALE—continued.

**FORWARDING** and Despatch Clerk wanted; must have had experience in the packing and shipping of Drugs, Chemicals, and Sundries, for export. Apply, 144/1, Office of this Paper.

**INVOICE-CLERK** wanted, for the Wholesale; aged about 22; good writing and accuracy indispensable. State experience and salary required, to 246/23, Office of this Paper.

**PROVINCIAL** firm of Manufacturing Chemists require a qualified Chemist to superintend the manufacture of up-to-date Pharmaceutical Preparations. Apply, stating age, experience, and salary required, to "Saloi" (133/60), Office of this Paper.

**WANTED.**—Correspondence Clerk, Shorthand Writer and Typist; must possess knowledge of the Drug and Patent Medicine trades. Apply, Goodall, Backhouse & Co., Leeds.

**WANTED.** a man thorough familiar with the manufacture of Yellow Prussiate of Potash, Cyanide of Potash, and similar products; one with a knowledge of the different methods, and with practical experience, may hear of a good opening by addressing Box 4,570, *Oil and Colourman's Journal* Office, 19 Ludgate Hill, London, E.C.

**WANTED,** a man who understands Mixing, putting up and packing; one who has had experience in a Wholesale Manufacturing Druggist's would find a comfortable and permanent situation; reference required; state age, experience, wages required, and references; communications strictly private. Letters only to "Chemist," c/o Atkinsons, 52 Fleet Street, London, E.C.

**WANTED.**—A competent Pharmacist, with some capacity for management, is required in a Wholesale House; Major qualifications essential; only those who have had first-class experience (preferably Wholesale and Retail) and who are capable business men need apply; very full particulars must be given in the first application. Apply "Major," c/o T. Dixon's Advt. Offices, 195 Oxford Street, W.

**WANTED.** Porters; aged about 22. Apply to Barron, Harveys & Co, 6 Giltspur Street, E.C.

**WET** Counterhands wanted, Junior, with some experience; also young man, with knowledge of Packing and to act as Porter. Write full particulars and wages required, to W. O. H., c/o Deacon's, Leadenhall Street.

**YOUNG** man required, to make Toilet Preparations for a Wholesale house. Apply, M. J. & Co., 25 White Street, Moorfields, London, E.C.

**YOUTH** wanted, who understands putting up and packing; to one suitable, who has had experience in a Wholesale Manufacturing Druggist's or Bottling Stores, good wages would be given; light work; permanent job; character required. Apply, after 12 o'clock, to Mr. Lait, 27 Store Street, Tottenham Court Road, W.C.

## SITUATIONS WANTED

1s. for 12 words or less; 6d. for every 6 words beyond.

## RETAIL.

**LOCUM**; qualified; for fortnight. Davies, 55 Clapham Road.

**LOCUM**; qualified; 27; experienced. "Reliable," 395B, Edgware Road, W.

**LOCUM**; qualified; 23; disengaged August 8. D. R. Whitley, Abbey Street, Rhyl.

**TEMPORARY**; registered; elderly. A.Y., 2 Station Road, Teignmouth, Devon.

**PART-TIME**; evenings; exceptional references. "Student," 21 Merrick Square, S.E.

**LOCUM**; qualified; aged 28; excellent references. J. Royle, Yew Tree Cottage, Wilmslow.

**WANTED.** situation as Dispenser to a Surgeon; country preferred. Powne, Amesbury, Wilts

**AS** Manager.—Qualified Chemist seeks engagements, or as Buyer. 235/13, Office of this Paper.

**LOCUM** or Temporary Assistant; 22; qualified. O. W. F., 9 Tulse Hill, Brixton, London, S.W.

**LOCUM**; qualified; 30; Photography; disengaged August 4. Howes, c/o Siedman, Snodland, Kent.

**ASSISTANT**; Apothecaries'; 27; 5 ft. 7½ in.; good references. Holmes, South Ormsby, Alford, Lincs.

**TEMPORARY** Assistant or Locum-tenens; unqualified; 23; tall. M., 4 Crystal Road, Blackpool.

**BRANCH** Manager: Senior or Locum; 30; disengaged; good references. "Drugs," Catwick, Hull.

**QUALIFIED**; 25; good experience; disengaged. Address, G. F., 35 Milton Street, West Hartlepool.

**LOCUM**; qualified; few hours daily. F. A. H., National Dental Hospital, Great Portland Street.

**LADY** Dispenser (qualified) desires engagement. E., 29 Blenheim Crescent, Notting Hill, London, W.

**QUALIFIED**: Locum; tall; 25; good experience; outdoors. "Beta" (242/27), Office of this Paper.

**LOCUM**; Coast only; end of August; varied experience; reliable. W., 73 High Street, Gravesend, Kent.

**DISENGAGED.**—Drug, Oil and Paint; 34; good references. "Chemist," 387A Simefield, Bury, Lancs.

**ASSISTANT**: 13 years' experience; good reference; unqualified. A. R., 7 Moor Street, Newcastle-on-Tyne.

**LOCUM**; Minor; 25; disengaged; experienced Dispenser. "Methyl," 66 Old Hall Road, Brampton, Chesterfield.

**LOCUM**; qualified; Yorkshire or Midlands; excellent references. "Pharmacist," 79 Skipton Road, Harrogate.

**LOCUM** has two weeks vacant from August 11; qualified; experienced; aged 35. 38 Murrillo Road, Lee, S.E.

**ASSISTANT** (23) wishes re-engagement, about the end of August; City or West-End. 246/1, Office of this Paper.

**LOCUM**; qualified; 24; Brighton or South Coast preferred; disengaged August 8. 244/13, Office of this Paper.

**LOCUM - TENENS**; qualified; 32; disengaged; experienced. "Chemist," 38 Longfellow Road, Bow, London, E.

**ASSISTANT**; 23½; unqualified; Store, Dispensing, Photography; disengaged August. R. W., 9 Beech Street, Hull.

**RELIABLE**, qualified Locum; experienced; 26½; Extractor. Rogers, 53 Dunraven Street, Tonypandy, Glamorganshire.

**PART-TIME**; qualified; 27; disengaged mornings and few evenings weekly. "Student," 4 Fulham Place, Paddington.

**ASSISTANT** or Manager; long experience; aged 46; Extractor. "Phenacetin," 3A Victoria Street, Merthyr Tydfil.

**LADY** Dispenser (qualified), disengaged; 27; 8 years' hospital experience. "Dispenser," 41 Maidstone Road, Lowestoft.

**DISENGAGED**; varied London experience; 24; tall; good appearance. "Manager," 15 Methley Street, Kennington.

**IMPROVER**; aged 18; experience Cash Counter trade; Manchester district. Toft, Verandah Buildings, Dalton-in-Furness.

**LOCUM**; 27; qualified; disengaged August 13 to September 1; references. "Photographic," 39 Ledbury Road, Bayswater.

**CHEMIST** (qualified) wishes situation in Wholesale; position of trust; good refs. "Ipecac" (246/20), Office of this Paper.

**MANAGER** or Senior; 28; qualified; first-class experience; good references. Apply, X. Y. Z. (245/34), Office of this Paper.

**ASSISTANT-MANAGER**; Dispensing, Counter, Photography; experienced; tall. "Enquinine," 90 Gorse Lane, Swansea.

**ASSISTANT**; unqualified; good experience; seaside preferred. Crosher, c/o Bellamy H. Wakefield, Easy Row, Birmingham.

**MANAGER**; qualified; locum or permanency; disengaged; experienced, home and abroad; aged 32. 244/26, Office of this Paper.

**L.T.**; 50; qualified; town or country; Leominster till 29th. Hy. Baker, 22 Letterstone Road, Fulham, London, S.W.

**JUNIOR** (21) seeks employment; just out of apprenticeship; country preferred. H. Ames, 3 Knebworth Road, Stoke Newington, London, N.



**MANAGER** or Locum; 16 years' American and English experience; best of references. J., 71 Carlingford Road, Green Lanes, London, N.

**AS** Manager; aged 46; qualified; first-class town experience; well up in Dental. "Dens," 3 Percy Villas, West Avenue Road, Walthamstow.

**JUNIOR**: qualified; part or full time; outdoors; in three weeks; Photographic; London only. Bowling, 42 Trinity Square, Borough, S.E.

**AS** Assistant or Senior in or near Nottingham; long experience; Prescriber; outdoors, or live on the premises. "Guaiacol," 57 Gordon Road, Nottingham.

**MANAGER** or Locum: 20 years' experience; best references; abstainer; married; disengaged. Turner, Chemist, Dentist, 71 Sussex Road, Holloway, N.

**LOCUM-TENENS**; middle-aged; qualified; Dental operator, registered; first-class experience; disengaged about August 10. A., 49 West Avenue Road, Walthamstow.

**HEALTH RESORT** preferred; August 18; unqualified; Manager or otherwise; aged 27; well up all branches; temporary or permanent. 242/32, Office of this Paper.

**DISPENSER**. Hospital or Surgeon; London; Major qualification; experienced; disengaged; could accept temporary engagement. "Menthol" (244/12), Office of this Paper.

**DISENGAGED** August; Assistant or Locum; first class experience; smart, and good appearance; town or country; good references. "Eadem" (244/34), Office of this Paper.

**QUALIFIED** Chemist, married (35), experienced, reliable, seeks Managership, London or suburbs; unexceptionable references. "Capable" (242/28), Office of this Paper.

**MANAGER** for Branch, with house attached, by qualified middle-aged gentleman; good-class country and town experience. "Chemicus," c/o Mr. Taylor, 53 Lodge Street, Accrington.

**MANAGER**; qualified; now disengaged; Extractor, excellent testimonials; married, having own furniture; Newcastle preferred. Munro, 64 Normanton Terrace, Newcastle-on-Tyne.

**WANTED**, position as Manager or Buyer; qualified; good varied experience; aged 29; present situation nearly 5 years; at liberty one month from any fixed date. 245/11, Office of this Paper.

**A YOUNG** gentleman, son of clergyman, and M.A., Cantab, is ready to take an Assistant's position in town or country; quiet place preferred; good references from last employer. G. B., 37 Leybourne Road, Leytonstone.

**MANAGER**.—Fully-qualified Pharmaceutical Chemist, leaving for Cape Town about middle of September, is open for position as above; 35 years of age, with 13 years' experience in Pharmacy, and so circumstanced as to have attained a considerable medical experience (outdoors). 240/32, Office of this Paper.

## WHOLESALE.

**GENTLEMAN** (25) desires position as Traveller; highest references. Apply, Willey, 61 Langdale Road, Scarborough.

**GENTLEMAN** (23) wishes situation in good-class Wholesale house, with view to Representing same. 246/2, Office of this Paper.

**TRAVELLER**, disengaged, is open to represent good house in Drugs or allied. J. O., 76 Crocketts Road, Handsworth, Birmingham.

**ADVERTISER** (30), 16 years' Retail experience, excellent references, desires appointment in Wholesale house. 240/20, Office of this Paper.

**AS** Export Invoice Clerk; 14 years' experience; good references; terms moderate. "Chemicus," 4 Lloyds Road, Blackhorse Road, Walthamstow.

**CLERK** requires situation, Wholesale warehouse; quick at figures; 7 years' references. W., 13 Coinbrook Street, St. George's Road, Southwark.

**CHEMIST** (38), leaving Retail, desires engagement, Drugs, Sundries, or Agency; married; abstainer; good experience. "Mac" (239/37), Office of this Paper.

**PHARMACEUTICAL** Chemist (24) desires engagement with a firm of Wholesale Manufacturing Chemists; excellent references; first-class Retail experience; nominal salary. "Salophen," 3 Bedford Place, W.O.

**ADVERTISER** has a thorough knowledge of Wholesale and Retail trade, Shipping and Foreign Markets, also Manufacturing and Laboratory work, and is open to engagement as Manager of works, or position of trust. W. T. (242/22), Office of this Paper.

**PROPRIETARY ARTICLES**.—Gentleman, who has successfully introduced, boomed, and created a demand for many new and, to the British public, hitherto unknown preparations, with offices and stock-rooms in Birmingham, will shortly be open for another engagement, and is prepared to boom any article in Great Britain and Ireland; highest trade references and proof of past success given; only firms with capital, who have an idea as to the expense of booming a new preparation, need apply. Address to "Proprietary," 16 Castle Street, Birmingham, England.

## MISCELLANEOUS.

*Special charges are made for Advertisements under this heading, which can be obtained on application.*

**DAISY (LIMITED)**, Leeds, will be happy to advertise (at reasonable rates) in Chemists' Lists, &c., &c.

**COLCHICUM**—Fresh Roots ready for delivery shortly, in large quantities. For particulars apply, Viscount Portman's Estate Office, Taunton.

**IT** will pay you to stock the St. Erile Lemon Crystals; flavour delicious; 4½d. bottles, enough for 33 glasses, 3 dozen in handsome outer, 30s. gross, net cash; sample, post free, 4 stamps. Western Pharmacies Co., Yeovil.

**A COMPETENT** firm wishes, for the sale of well-introduced and good selling cosmetic specialities in England, to open up with a respectable firm ready to undertake the sale on fixed terms. Address, with full particulars, to O. W. 1739, c/o Haasenstein & Vogler, A. G., Köln-on-Rhine.

**INCREASING SALE**.—Quinine Pessaries; guaranteed to contain full quantity of hydrochloride, basis pure cocoa butter only; absolutely reliable; 7s. 6d. per doz. boxes (1 doz. in each, partitioned); cash must accompany order; postage extra. The Theobroma Co., Oxford Mansions, New Oxford Street, W.C.

**DENTAL DIPLOMA, L.D.S.**—By the regulations of the Royal College of Surgeons in Ireland, "registered" Dentists are admitted to the Final Examination for the Diploma of L.D.S., R.O.S. For particulars of requirements, fees, and tuition, apply to "Gomphosis," 16 Ismailia Road, Forest Gate, London.

**NERVE-KILLER**.—To be applied to the cavity of the aching tooth on cotton wool. Painless. Harmless. In bottles, price 3s. per doz., carded. A very saleable and reliable line. Purchasers invariably recommend it to others. 3-dozen lots, boxed, with customer's own name and address, at 3s. 6d. per doz. Sole agents appointed. Samples free. Evans Bros., 112 North End, Croydon.

**SULPHUR-TABLETS** and Sulphur and Sarsaparilla Tablets, in 7-lb. minged and labelled boxes: 2 cwt. 33s. cwt., carriage paid; 1 cwt. 34s., ½ cwt. 18s., 23 lbs. 10s., carriage forward, prices and show-cards free; Sticky Fly-papers, your own name, 5s. gross, 5-gross lots carriage paid; Disinfecting Shells, 4s. 3d. gross, 5-gross lots £1. Christy & Co. (late White), Chemist, Leicester.

**JOHN COWPER**, "The" Artistic Shopfitter, offers some bargains in high-class Fittings; counters, desks and cases, wall-cases, dispensing-screens, window-enclosures, drug fixtures, &c., &c., and our own "Specialité" counter-cases, pronounced to be "the most useful and artistic case on the market"; it will pay you to state your requirements, and let us send you sketch and specifications by return. Address, 28 Cleveland Square, Liverpool.

**BOTANICAL SLIDES FOR THE "MINOR."**—Students have often expressed to me their difficulty in obtaining a suitable set of the above at a moderate cost. To meet this want I have prepared a limited number of sets, of 25 slides, containing over 40 preparations. Slides are numbered, not named. One set in case, with descriptive circular of preparations, sent post free for 15s. Sets will be sent in order of application received. Wishart, 65 Beaconsfield Place, Aberdeen.

**CHEMISTS' shop fittings**.—12-foot run of mahogany-fronted drawers, with bevelled-edge glass labels, shelving cornice and lockers complete; 12 feet mahogany and plate-glass serving counter; 6-foot dispensing screen with mirror centre and counter, with sponge case under; 8-foot mahogany and glass wall case; desk and perfume case; 5 feet bent plate-glass counter case; £55 the lot; all in perfect condition. Philip Josephs & Son, 54 Old Street, London, E.C.

**CHEMISTS' Fittings**.—High-class Fittings at Low Prices.—14-ft. Chemist side fitting, fitted 70 mahogany-fronted drawers, bevelled glass labels, cut-glass knobs, lockers, shelves, cornice, &c., complete £15 10s.; mahogany-top serving counter, plate-glass front, 10 ft. 6 in. long, £9 5s. bent plate-glass counter-case, 5 ft. long, 80s. Cheap house for window enclosures, alterations, wall-cases, glass facias, and stall plates. Chemists fitted complete. Estimates free. Mills, Shop-fitter, Shop-front Builder, Steam Works, 163-165 Old Street, London, E.C. (late 233 City Road).

**CHEMISTS' Shop-fittings**.—Ranges mahogany drawers, with bevelled-edge glass labels and cut-glass knobs, shelving above, lockers below; mahogany dispensing-screens; counters with glass-case fronts; wall-cases; bent-front and flat-top counter-cases; counter-desks; tooth-brush cases; complete shop-rounds, &c.; every requisite for Chemists, new and second-hand; extensive stock to select from, at extremely low prices; practical men sent to all parts; estimates free. Matthews, Chemists' Fitter, 14 and 18 Manchester Street, Liverpool: Works: 9 Preston Street, Telephone 6886. Illustrated Catalogue on application.



## MISCELLANEOUS—cont.

**BLAUD'S PILLS** (Pink or White Coated); 100 gross lots and upwards, 1*ld.* gross; ditto, packed 1 gross in tin, labelled, ready for sale, 2*4s.* gross. Saline, handsomely decorated tins, to sell at 4*ld.*, 2*4s.* gross. Hope & Co., 462 Holloway Road, N.

### CUCUMBER AND GLYCERINE.

**ROUSE'S** Cucumber Paste is the best for preparing Cucumber Emulsion. Formulæ and labels free with each jar;  $\frac{1}{4}$  lb. (for 3 lbs. emulsion), 2*s.* 3*d.*; 1 lb., 4*s.* 3*d.*; 7 lbs., 25*s.*, post free. Rouse, 61 Charlotte Street, London, W.

N.B.—Cucumbers actually enter into the composition of this article

### STIRLING'S MINOR AIDS.

Synopsis of Equations of the R.P. Chemicals (1899). 1*s.*  
Organic Materia Medica. In accord with B.P., 1898, and New Minor schedule, 1899. Much enlarged. In limp cloth, 1*s.* 9*d.*; in cloth boards, 2*s.*  
Notes on Dispensing. Pocket edition. Interleaved for M.B. notes. 1*s.* 6*d.*  
Pharmaceutical Latin and Prescription Reading; with Rev. 1*s.* 6*d.*  
A Manual of Botanical Terms (B.P. 1898). Over 2,000 references. 1*s.* 6*d.*  
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Vest-Pocket Dose Book (B.P. 1898). Very compact and handy. In cloth, 6*d.*  
Synopsis of Doses, Strengths, &c., of R.P. 1898. Pocket Edition. 9*d.*  
Tabulated Synopsis, B.P. 1898. A Short Cut. Systematic and Concise. 9*d.*  
All post free throughout the world. (Descriptive List post free on request.)

JOHN GOWER, Publisher, Waterloo, LIVERPOOL.

### F. C. HILLS & CO.

**NOTICE IS HEREBY GIVEN** that the Chemical and Artificial Manure business carried on by us the undersigned James Charles Barclay Harvey, Edward Douglas Lennox Harvey, and Charles William Middleton Kemp as Executors and Trustees of the Will of Edward Henry Hills deceased at the Chemical Works Creek Street Deptford in the County of Kent under the style or firm of F. C. Hills & Co. has as from the 30th day of June 1900 been sold by us to Mr. Thomas Herbert Hills who will continue to trade under the name or firm of F. C. Hills & Co. on his own behalf at the Chemical Works Deptford aforesaid. All debts due to and owing by us up to and inclusive of the said 30th day of June 1900 will be received and paid by the said Thomas Herbert Hills on our behalf.

Dated this 12th day of July 1900.

J. C. BARCLAY HARVEY.  
E. D. L. HARVEY.  
C. W. M. KEMP.  
THOMAS H. HILLS.

Witness to the signatures of James Charles Barclay Harvey, Edward Douglas Lennox Harvey, Charles William Middleton Kemp and Thomas Herbert Hills

Clement Stone-Wigg Solicitor  
11 Queen Victoria Street E.C.

## THE "ACME" WEED KILLERS

Have now a large sale through CHEMISTS, and early application should be made for Illustrated Counter Bills and Show Cards.



### POWDER WEED KILLER.

Packed in small decorated tins.  
Immediately soluble in cold water.

All tins Free.  
No return empties.  
Specially adapted for Export.

### LIQUID WEED KILLER.

Strength: 1 gall. sufficient for 25 galls. of water.

### DOUBLE STRENGTH.

1 gall. sufficient for 50 galls. of water.

Liberal terms to the Trade. Particulars on Application.

### GENUINE KENTISH COMPRESSED HOPS.

In 1 lb. and  $\frac{1}{2}$  lb. packets, with directions for making Hop Ale, Hop Bitters, &c.

Also best Kentish Hops in bulk.

### QUASSIA CHIPS, QUASSIA CUPS, &c.

SOLE PROPRIETORS AND MANUFACTURERS—

## THE ACME CHEMICAL COMPANY, LIM.

TONBRIDGE, KENT,

And CARLTON ST., BOLTON, LANCASHIRE.

## Summary of Principal Contents of to-day's issue of "The Chemist and Druggist."

A SUMMER IDYLL, in which a syphon played a part, is sketched on p. 219.

WE BRIEFLY comment upon the report of the inspector of explosives (p. 137).

THE latest information regarding the Bandong Quinine-works is given on p. 220.

MORE OF DR. SCHLEICH'S FORMULAS for skin-preparations are given on p. 138.

FOR selling mild mercurial ointment two convictions are recorded this week against chemists (p. 214).

MR. J. T. HALL contributes an interesting article on the dispensing of homœopathic prescriptions (p. 139).

KRAYSER writes in a happy way regarding French pharmacy and the opinions of some of our correspondents (p. 132).

THE STUDY OF RESINS is now taking more definite shape and promises to be a distinct branch of chemistry (p. 136).

DR. LEONARD DOBBIN protests against the manner in which Dr. John Attfield has treated Pharmacopœia critics (p. 216).

THE photograph of the Conference party taken at the Royal Botanic Gardens on Tuesday is printed in this issue (p. 151).

THE names of those who have passed the Minor examination in London this week are printed on p. 126. The failures were heavy.

AN advance of about 50 per cent. in the price of bismuth is the feature of the markets this week; otherwise business is very quiet (p. 221).

THE BRITISH PHARMACEUTICAL CONFERENCE has met in London this week, and is fully reported in this issue. See table of contents for details. The meeting was a complete success. Dublin is the place of meeting next year, and Mr. G. Claridge Druce the President (p. 145).

MR. MOSS reports upon the last analytical competition for students, and this time a lady, Miss Barr, of Gourrock, takes off the first prize (p. 118).

SOME PERSONAL NOTES in regard to Mr. Holmes, the president of the B.P.C., with pictures illustrative of his hobbies in natural history, are printed on p. 145.

IN THE SECRETARY BIRDS who are taking the arena in our pharmaceutical aviary this week, Messrs. Naylor and Ransom, of the B.P.C., will be recognised (p. 132).

TWO pharmaceutical veterans are figured in our pages; they are W. B. Randall, of Southampton, and Dr. A. M. Robertson, of Glasgow. Their portraits are given (p. 130).

TWO OF OUR WAR CORRESPONDENTS write further letters in regard to their experiences in South Africa. The notes are illustrated with a picture of dispensers and Boer prisoners (page 143).

MR. G. CLARIDGE DRUCE, the new President of the B.P.C., contributes to this number an entertaining article on his North African experiences, which is illustrated with photographs (p. 140).

THE PHARMACY AND MEDICAL CLAUSES of the Companies Bill were struck out by the House of Commons on Tuesday afternoon. The debate is reported on p. 202, and the incidents which led up to it on p. 137.

SOME NEW INFORMATION regarding otto of rose, especially with reference to its production in Bulgaria, is given on p. 193, and in this connection Mr. E. J. Parry reports upon several samples of otto, the like of which have not been reported to science (p. 198).

THE COURT OF APPEAL has reversed the judgment of Mr. Justice Stirling, which permitted Mr. C. R. Valentine to call a beef-preparation "Valentine's," the Court holding that the proprietors of Valentine's meat-juice have the right to the name (p. 213).



## Late News.

### Generous Employers.

Messrs. W. Kemp & Son, wholesale druggists, Horncastle, have twenty of their employés going to the Volunteer camp on Saturday; full pay will be granted them for the whole fortnight.

### Coal and Competition.

Pentrepoth Chemical-works, Morriston, have ceased operations for an indefinite period, owing, it is said, to the high price of coal and keen competition. Many men are thrown out of work.

### A Popular President.

Mr. F. Maitland, President of the Plymouth, Devonport, Stonehouse, and District Chemists' Association, and Chairman of the Stonehouse District Council, has been appointed Vice-President of the Three Towns Rifle Club.

### The Conference Excursion.

As we go to press we hear that the excursion down the river from Henley to Maidenhead is, so far, a brilliant success. The weather is splendid, the heat being tempered with a delightful breeze. The two barges and launch are well on the way to Skindle's Hotel, Maidenhead, where dinner is to be held.

### Poisonings.

On Monday a boy at Burnham drank some benzoline, thinking it was water. He died half an hour afterwards.

An inquest was held at Market Drayton on July 23 on the body of a carbolic victim. Deceased had inquired of Mr. George Hulme, of the Elephant and Castle Inn (who is a chemist), whether carbolic acid was a good thing to add to whitewash. He was subsequently found in a dying condition with an empty carbolic-acid bottle by his side, bearing the label of Mr. George Morrey, pharmaceutical chemist, Market Drayton.

### Legal Report.

The case of Goodwin *v.* the Ivory Soap Company, referred to on page 213 of this issue, was concluded to-day (Thursday). His Lordship in giving judgment said he could not see that the plaintiff had established such a proprietary claim to the word "Ivy" as to enable him to go to the Court and say that the defendants, having sold their soap in this country in the ordinary course of trade, should not be allowed to do so in the future. Judgment would, therefore, be for defendants, with costs.

The plaintiff's solicitor has written to us that he has received instructions to give immediate notice of appeal.

### Assistants in Trouble.

At Brighton on July 24, Thomas Coultas Hobson, chemist and druggist, was charged with embezzling money from Messrs. Headlands (Limited), Brighton. Prisoner had been employed by the firm for the last twelve months as manager of their branch at 12 London Road, and it is alleged has not accounted for sums of money received over the counter. The Deputy-Stipendiary committed the prisoner for trial at the Quarter Sessions, bail being allowed.

At Morecambe on July 25, David Middleton, 70 Clarendon Road, Morecambe, was charged with stealing one shilling from his employer, Mr. Thomas Waddington, chemist, 30A Regent Road, Morecambe. There was also a second charge of stealing various sundries. Prisoner was suspected, on account of a falling-off in the returns, of not entering articles sold, and pocketing the money. He was remanded until Saturday for inquiries.

## Supplementary Markets.

### Liverpool Drug Market.

*Liverpool, July 25.*

CASTOR OIL.—The arrivals per s.s. *Musician* are being cleared from the quay slowly, the value being 3½d. good second Calcutta in that position, or 3½d. ex store. First-pressure French is steadily rising in value, and 3½d. to 3½d. is now asked. First-pressure English is held for the same price. A very good opinion of the forward market is held by importers.

GRAINS OF PARADISE.—All the recent arrivals—94 bags in all—have been cleared from the quay at 30s. per cwt.

QUILLARIA is steadily held for 14l. per ton, and some large parcels are being held off the market for better prices.

CANARY-SEED.—About 1,000 bags have been sold at 29s. per quarter, and some rather better quality at 30s.

COPAIBA.—Six barrels Maranham, just landed, were offered at auction, but no sales were effected; later on part sold, but price was not reported. The balance is held for 1s. 5d. per lb.

ALOES, CURACAO.—Twenty-two boxes changed hands at 22s. 6d. per cwt.

CHILLIES (SIERRA LEONE).—A small sale was made at 45s. per cwt.; market is now cleared.

BEESWAX (CHILIAN).—Twenty-five packages have been sold during the week at 7l. 5s. to 7l. 7s. 6d. per cwt.

KOLA-NUTS.—Two tons good quality W.C.A. have found a buyer at 1½d. per lb.

### German Drug Market.

*Hamburg, July 24.*

Our drug-market shows a firm tendency for most of the Asiatic products.

CAMPOR (REFINED) is dull, with second-hand sellers at 455m. per 100 kilos.

CASSIA LIGNEA is very firm, and advancing.

COCA-LEAVES are firm and dearer, at 350m. per 100 kilos.

GALANGAL has advanced to 42m. per 100 kilos.

ERGOT OF RYE is very scarce, and stocks here are almost exhausted.

MENTHOL.—A small lot offered to-day at 19½m. per kilo.

QUININE is firm, with a better demand, at 49m. per kilo.

WORMSEED quiet and lower, at 60m. per 100 kilos.

JAPANESE WAX is firmer, at 61m. per 100 kilos.

CASTOR OIL is firm, and advancing, at 64m. per 100 kilos. for first-pressing in barrels.

COD-LIVER OIL is dearer, at 75m. to 76m. per barrel.

### American Drug Market.

*New York, July 17.*

The market has been somewhat more active owing to the troubles in China, and almost all Chinese drugs have advanced materially. The quinine market has also improved consequent on the long-delayed advance in quotations. Otherwise business is seasonably dull.

BUCHU-LEAVES are in light supply, and quotations are higher. Demand has improved owing to reports that fresh supplies from the Cape will not arrive before the end of the year. Quotations are somewhat irregular, short being quoted from 14c. to 18c. per lb., and long at 20c. to 24c.

CASCARA-SAGRADA is quiet, and values are steady at 4½c. to 7c. per lb., according to age.

GOLDEN SEAL (HYDRASTIS).—Prime fall-dug root is firm at 52c. per lb., but spring-dug root is offered at 44c.

OPIMUM is improving in sympathy with foreign markets. Single-case lots have been advanced to \$3.15 per lb., and larger quantities to \$3.10.

QUININE has advanced 2c., and the tendency is still upward consequent on the higher price of bark. The demand has improved, and manufacturers' quotations are strong at 33c. per oz. Outside holders have only very small supplies, and will not shade current figures. Java is obtainable in bulk at 32c.

SENEGA is quiet at 33c. per lb.

SERPENTARIA is higher owing to light arrivals from producing-points. Quotations are well maintained at 28c. to 30c.

### Cablegram.

NEW YORK, July 26, 3 38 P.M.:—A fair amount of business is going on. Opium has been advanced to \$3.38 per lb., and quinine is very firm at 35c. per oz. Buchu-leaves have been marked up to 17c. Both Manitoba and Minnesota senega-root are firmer at 29c. and 31c. per lb., respectively, and cubebs are scarce and advancing, 13c. being to-day's quotation.

CANNABIS INDICA is slow of sale, and prices are unchanged.

ERGOT.—A small sale is reported of Russian at 2s. 3d. per lb. spot.

GRAINS OF PARADISE.—The sale of 94 bags at 30s. per cwt. in Liverpool has also caused a slump on the London market.

QUININE.—To-day the market is quiet, with an easier tendency, the only transaction recorded up to 'Change hour being a 10,000-oz. lot at 1s. 5½d. for spot.

SULPHUR.—Sicilian is lower owing to arrivals. Roll is now quoted 6s. per cwt., and flowers 6s. 3d., on the spot.

# Exchange Column—Bargains.

$\frac{1}{2}$  d. per word with name and address. 1d. per word if we register the address and attach a number.

No Advertisement inserted for less than 6d.

Remittances payable to EDWARD WALSBY, and crossed MARTIN'S BANK, LIMITED.

## FOR DISPOSAL.

### APPARATUS.

- Set of Minor apparatus, cheap, 10s. 240/22, Office of this Paper.
- 3-flask Whitney vulcaniser, in thorough condition; dental-chair, somewhat old-fashioned but solid, needs a little repairing; what offers? TOTTLE, Chemist, Epsom.
- 50-gal. bottle N. O. gas, stop-cock and mohair tubing, mahogany case, face-piece out of repair, others good condition, 35s. lot. "DENTIST," 141 St. James's Street, Burnley.
- Enterprise tincture-press, 10s.; suppository-mould, 15-grain, 24 holes, electroplated, ss Maw's, 16s. 6d.; both equal new, carriage paid. WARNEB, 333 Gray's Inn Road, W.C.
- Orient soda-water machine, complete with syphon-filler, &c.; and Otto gas-engine,  $\frac{1}{2}$ -h.p. nominal; to be seen working; only in use 12 months; will sell cheap. EDWARDS, Chemist, Fallowfield, Manchester.

### BOOKS AND PERIODICALS.

- What offers for *C. & P.*, 1899; *Pharmaceutical Journal*, 1894, 1895, 1896, 1897, 1898? H., 19A King Cross Road, Halifax.
- "Pharmaceutical Journal," 1869-70 to 1878-79, 10 vols., 9 half-bound leather to match, one cloth, 10s. 144/25, Office of this Paper.
- Seven years' *British and Colonial Journals*; 6 years' *Pharmaceutical Journal*, few numbers missing; all in good condition; 3d. per lb. ALLEN, Chemist, Plymouth.

### DRUGS AND CHEMICALS.

- 650 oz. Howards' sulphate of quinine, in 4-oz. bottles; what offers for whole or part? J. M., 32 High Street, Brecon.
- Otto roses, virgin,  $\frac{1}{2}$ -oz. original (gilt) bottle, 25s. 6d.; oil lavender, Mitcham, 1-lb. original (capsuled) bottle, 25s., delivered. Cheque, WARNEB, 333 Gray's Inn Road, W.C.

### FORMULÆ.

**Lemonade-powder**, makes 6 gals. delicious lemonade, sells by hundreds at 3½d., cost; 1s. 3d. doz. to produce; most profitable line out; formula, label, window-bill, 1s. EDWARDS, 99 Murdock Road, Handsworth.

**Money-making recipes**.—Over 20 years in daily use; thoroughly practical; preparations are excellent and pay well; "Tooth-Ache Cure," gives instant ease, arrests decay, not unpleasant; "Tic Specific," acts like magic, cures after all other remedies fail; "White Oils," most wonderful cyclists' embrocation ever offered, gives elasticity and strength to the muscles; "Corn Cure," cures in 10 minutes and cures under a week, cheap; "Lemonade Crystals," better flavour and more liked than any advertised; "Sunburn Lotion," most useful seaside toilet line, soothing and beautifying; "Tender-Foot Powder," rapidly reduces inflammation, cooling, sweetening, and comforting; "Head-ache Powders," far better than the many advertised, contains caffeine; "Nursery Lotion," cleanses the hair, and renders insect life impossible, very pleasant and refreshing; "Quinine and Iron Tonic," pleasant taste, grand invigorator, always brilliant, no decomposition, pays splendidly; "Sweet Violets," lovely enchanting odour, of real flower, everlasting, admired by all, cost 6s. lb.; "Blood Cleanser," equals any sold, pleasant taste, large bottle will retail at 1s., paying half; "Glycerine Oream," an ideal emollient, neither sticky nor greasy, one bottle will sell 100, quite inseparable; "Occasional Pills" for ladies, highly praised, very reliable and quite safe; "Ringworm Specific," warranted to cure the worst case, painless and cleanly; recipes 1s. 1d. each, 3 for 2s. 6d., 13 for 10s., with full instructions for making, post free; detailed list of 480 recipes and particulars of specials free.—TOM BROOKS, Chemist, Horney, London, N.

### OPTICAL AND PHOTOGRAPHIC.

- Test case, trial-frame and test-type; cost over £9 a year ago; lowest price £5 10s. Particulars on application, 144/25, Office of this Paper.
- Complete quarter-plate aluminium camera, with 5 by 4 Ross lens, 6 very good double dark slides, aluminium tripod and strong leather case; all perfect condition, equal to new; what cash offers? PICKEN, Chemist, Newport, Shropshire.

### SHARES.

- Canwal preference shares, 100 for sale at best offer. HOLICK, Lozells, Birmingham.
- 200 Seigel ordinary, 8s. each (with 6d. a share dividend just declared). 245/10, Office of this Paper.
- For sale, 100 £1 6% cumulative preference shares in Headlands (Lim.), Brighton; price £120, or nearest offer. 242/19, Office of this Paper.

### SHOP FITTINGS.

- Chemists' drawers, shop-rounds, and carboys for sale. GOSS, 3 Sloane Street, S.W.
- Handsome glass-case fronted counter and the stock and fittings for removal of chemist's shop, at MORRIS, 331 West Green Road (near West Green Station), London, N.

### MISCELLANEOUS.

- Large mineral-water trolley, cheap; inspection invited. BURDEN, 78 Duke Street, Grosvenor Square.
- 1 doz. of trusses, various sizes, clean, 6s. 6d.; also set of 8 pairs plated tooth-forceps, as new, 25s. HALFORD, Chemist, Hockley, Birmingham.
- 15 doz. black seamless enemas, polished, boxed complete, 17s. doz.; 9 lbs. black feeder-tubing, 6s. 9d. lb., carriage paid, perfect condition. Cheque to O. MEACHEN, Cheshunt Cottage, Westcliff-on-Sea.
- 24 Williams's and 24 Carter's, £3 7s. 6d.; 8 Rooke's pills, 2s. 9d., 12s.; 15 Chase's food, 2s. 9d., 15s.; 2 oz. morph. hydroch., 10s.; 2 lbs. bismuth nit., 10s.; cash with order, post free; offers wanted for gross Munyon's, well assorted, all saleable. EASTMAN, Forest Lane, Stratford.

## WANTED.

- Few shop-rounds for oils, with or without caps, cheap. DECK, Chemist, Cardiff.
- Dental-chair. Particulars and price to RITCHIE, 84 Balgrave Road, Leicester.
- Second-hand wall case, bent front. Send size and price to 241/33, Office of this Paper.
- Canwal ordinary and preference. State number and price to 245/16, Office of this Paper.
- Old electric lamps and scrap platinum. P. ROWSELL, 9 Derwent Grove, East Dulwich, London.
- All Minor books, latest editions; also Lowson's "Botany." F. M., 114 Garfield Road, Nottingham.
- "The Management of Infancy and Childhood," by Howard Barrett. DOUBLEDAY, Dorking.
- Platin spec-jar, circumference about 42 in., height about 26 in. BURDEN, 78 Duke Street, Grosvenor Square.
- Counter showcase for compressed tablets, B. W. & Co.'s or similar. State price, 84 Comiston Road, Edinburgh.
- 5s. with security given for one week's loan of "Manufacturers' Up-to-date Recipe-book," published by Lewis Jameson. 240/31, Office of this Paper.
- A good second-hand mahogany dispensing-screen, with cases, to place on counter 6 ft. long; lowest cash price. Apply, CORFE, Chemist, Maidstone.
- Newth's "Inorganic Chemistry"; Ramson's "Organic Chemistry"; Muter's "Analysis"; Lowson's "Botany"; Greenish's "Materia Medica"; Ince's "Latin Grammar"; Everett's "Physics." State prices and editions, PARKER, 40 Market Street, Hoylake.



# A GOOD ARTICLE

Always commands a good price.

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## LEATH & ROSS'S HOMOEOPATHIC MEDICINES

*Command a good price.*

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THEY SELL WELL.

THEY PAY WELL.

They give satisfaction, and the educated and enlightened class of customers will have them.

Hence there is an increasing demand for them amongst the

**BETTER CLASS OF CHEMISTS,**

who find their **£5 HANDSOME UPRIGHT SHOWCASE** to be the best value on the market.

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***Complete List and Best Terms Post Free.***

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## LEATH & ROSS

58 Duke St., Grosvenor Square, W., LONDON.

The advertisement is a rectangular label with a dark, textured background. At the top, the word "Perfect" is written in large, bold, serif capital letters. Below it is a detailed illustration of several lemons and their leaves, some hanging from a branch. In the center, a small, light-colored, irregularly shaped label contains the words "Soluble ESSENCE OF" in a mix of script and serif fonts. Below this, the word "Lemon" is written in large, stylized, cursive letters. At the bottom, a dark rectangular box contains the text "STEVENSON & HOWELL LTD" in bold, serif capital letters, followed by "35, SOUTHWARK ST LONDON SE" in a smaller font. To the right of this box, the words "DISTILLERY OLD PARIS GARDENS S.E." are written in a small, sans-serif font.

Perfect

Soluble  
ESSENCE  
OF

Lemon

STEVENSON & HOWELL LTD  
35, SOUTHWARK ST LONDON SE

DISTILLERY  
OLD PARIS  
GARDENS  
S.E.

"PERFECT SOLUBLE ESSENCE OF LEMON MAKES PERFECT LEMONADE."



THE HOME OF THE  
GINGER PLANT

SOLUBLE  
ESSENCE OF

# JAMAICA GINGER

"EXTRA QUALITY"

BRINGING THE  
GINGER  
TO MARKET

Containing all the constituents of the Finest Jamaica Ginger  
in a PERFECTLY SOLUBLE FORM.

UNSURPASSED FOR **STRENGTH, FLAVOUR & AROMA**

See "THE LANCET."—July 3rd, 1886.

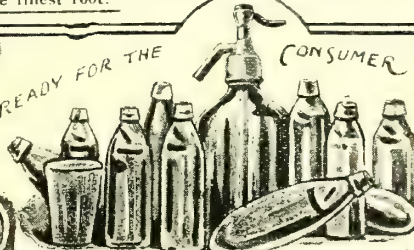
STEVENSON & HOWELL'S EXTRA QUALITY SOLUBLE ESSENCE  
OF JAMAICA GINGER

"According to our analysis and examination this is a perfect ginger  
essence. We have searched most carefully for the active principle of  
capsicum, and have not found the slightest trace. As might be expected  
from its composition the flavour of this essence is more delicate than  
that of the finest root."



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CONSUMER



BRUGHT DIRECT TO  
STEVENSON & HOWELL'S  
FACTORY  
95, SOUTHWARK ST.  
LONDON S.E.

**STEVENSON & HOWELL LTD 95, Southwark St LONDON S.E.**

DISTILLERY—OLD PARIS GARDENS, S.E. || MANCHESTER OFFICE—4, PRODUCE EXCHANGE, FENNEL ST.



PURE SOLUBLE ESSENCES  
FOR  
HIGH-CLASS AERATED WATERS.

Highly-concentrated Fruit Essences and Extracts.  
ESSENTIAL OILS OF SELECTED QUALITIES.



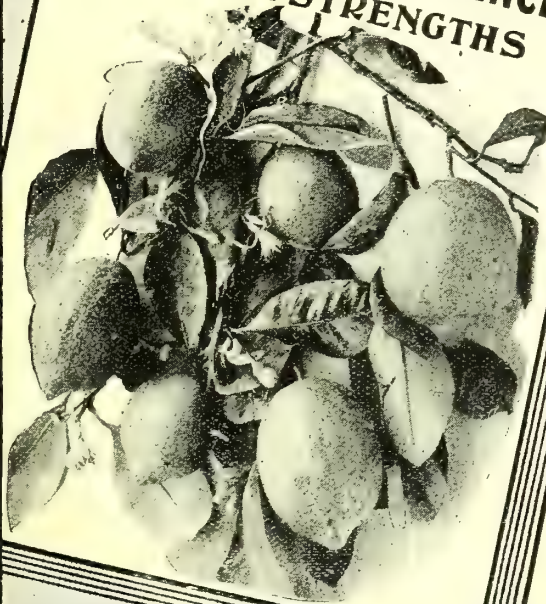
STEVENSON &  
HOWELL LTD  
95 SOUTHWARK ST  
LONDON SE

STEVENSON & HOWELL, Ltd., invite special attention to their highly concentrated Raspberry and Strawberry Fruit Extracts. Unsurpassed for flavour, aroma, and economy in use.



# Stevenson & Howell Ltd

Highly Concentrated  
**SOLUBLE LEMON ESSENCES**  
 OF ALL STRENGTHS

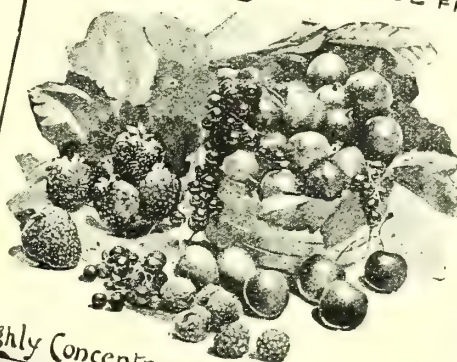


FOR  
**Lemonade &  
 Fruit Crystals**

**HARMLESS COLOURS**

Terpeneless  
**Oil of Lemon**  
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Use Genuine  
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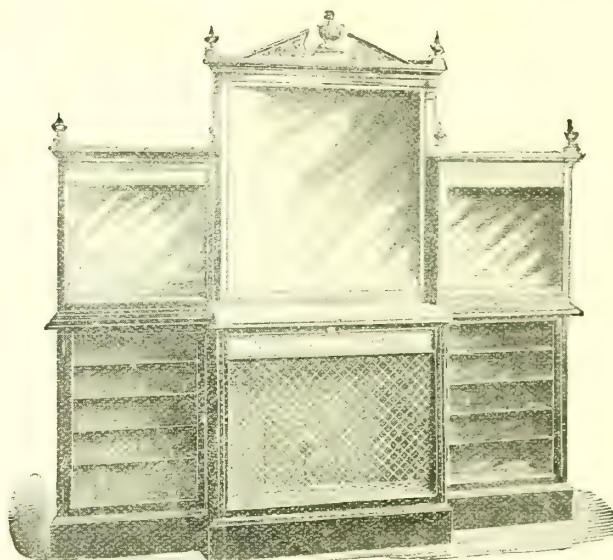
SHOP FITTERS,

## 54, 68 & 93 OLD STREET, LONDON, E.C.

Telegrams—"JOSIPHIAH LONDON."

### Complete Sets of Shop Fittings

Screen and  
Counter  
Complete,  
6 feet,  
**£13 10s.**



Screen and  
Counter  
Complete,  
7 feet,  
**£15 10s.**

**£50**

10-ft. drug-fixture with bevelled labels and cut-glass knobs, mahogany pilasters, and cornice.

10-ft. mahogany-top serving-counter with panelled front and 13 drawers at back.

6-ft. mahogany mirror centre dispensing-screen, plate glass counter, and sponge-case combined.

4-ft. wall show-case.

Desk and perfume-case.

6-ft. window enclosure.

120 gold-labelled shop-rounds.

12 ungt. jars.

**£75**

12-ft. drug-fixture, with bevelled-edged glass labels and cut-glass knobs, mahogany pilasters and cornice.

12 ft mahogany and plate-glass serving-counter, with 23 drawers at back.

6-ft. mahogany mirror-centred dispensing screen, counter, and sponge-case combined.

Desk and perfume-case.

5-ft. bent plate-glass counter-case.

144 gold-labelled bottles.

12 ungt jars.

6-ft. wall show-case.

8-ft. window-enclosure.

**£100**

14-ft. drug-fixture, with bevelled-edged labels and cut-glass knobs, mahogany pilasters, cornice and carved work, and plate-glass mirror poison-cupboard.

14-ft. mahogany and plate-glass serving-counter, with 23 counter-drawers at back.

7-ft. mahogany dispensing-screen, counter, and sponge-case combined.

Desk and perfume show-case.

8-ft. mahogany and bent plate-glass counter-case.

180 gold-labelled bottles.

12 ungt jars.

12 pill-pots.

10-ft. mahogany window-enclosure, with plate-glass shelving.

8-ft. wall show-case.

**£150**

14-ft. drug-fixture, bevelled labels, and cut-glass knobs, bottle-shelving, mahogany pilasters, carved work, and cornice, the whole lined mirror.

10-ft. sundries' fixture to match, with cupboards.

14-ft. mahogany and plate-glass serving-counter, with 23 varied drawers at back.

8-ft. mahogany and plate-glass counter-case.

Desk and perfume-case.

7-ft. mahogany and plate-glass dispensing-screen.

180 bottles with enamel labels.

18 ungt. jars.

12 pill-pots.

10-ft. mahogany wall show-case.

10-ft. mahogany window-enclosure, with plate-glass shelving.

**£200**

16-ft. drug-fixture, bevelled labels and cut-glass knobs, mahogany pilasters and cornice, carved spandrels, brackets, &c., the whole lined with plate mirror.

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14-ft. mahogany and plate-glass serving-counter. 23 counter-drawers at back.

8-ft. mahogany and plate-glass counter-case.

Desk and perfume-case.

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200 enamel-labelled bottles.

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12 pill-pots.

10-ft. mahogany wall-case.

12-ft. mahogany enclosure, with plate-glass shelving.

4 swan-neck carboys.

Plate-glass centre-case for cameras, &c.



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ESTABLISHED 1826.

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## Shop Fitters & Show Case Makers,

### 54, 68 & 93 OLD ST., LONDON, E.C.

*Telegrams: "JOSIPHIAH LONDON."*

ALTERATIONS, RENOVATIONS, & REFITTINGS executed promptly, with a minimum of trouble to customer, and at prices to suit all pockets.

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"July 6, 1900.

"I have just been over the shop-fittings you have put up for me, and am very pleased with same. I notice that you have put me in really better goods than you specified. The work throughout has been done in a thoroughly satisfactory manner, and I must congratulate you on having such obliging and civil workmen. Again expressing my satisfaction and with kind regards."

AN EVESHAM CHEMIST WRITES:—

"July 4, 1900.

"Enclosed find cheque to settle a/c. I am very pleased with the cases and desk; they are well worth the money, and the jars also."

A NORTH PINCHLEY CHEMIST WRITES:—

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"I am very well satisfied with the work done at the above address by you, and think that it will make a very nice and also convenient shop."

A KENNINGTON CHEMIST WRITES:—

"July 17, 1900.

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A CARDIFF DRUG STORE COMPANY WRITE:—

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"Case to hand, with which we are much pleased. Enclosed cheque."

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ARE REAL MONEY MAKERS.



Shop Front as designed and erected by us for Messrs. Cave, Austin & Co., Ltd., 164 Rushey Green, Catford, London.

**TO MAKE MONEY** you must keep pace with the times, and not lag behind your Neighbours in making your premises attractive.

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And 10 ROOD LANE, off Eastcheap, LONDON, E.C.

Telegrams: "PARNALL BRISTOL."

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**MONEY SPENT** on a new Shop Front or Interior Fittings will increase your trade (frequently double it), and pay better than any other Investment. It will also prevent "Multiple Shop" Firms coming into your town and absorbing your Trade.

**WHEN RE-FITTING YOUR PREMISES** please remember that our Experts are constantly travelling throughout the Kingdom, and will be pleased to wait upon you to submit Designs, give practical advice, prepare Plans and Estimates, entirely FREE OF CHARGE.

**OUR UNRIVALLED FACILITIES,** large staff of skilled workmen, and immense stocks of seasoned Timbers, enable us to execute contracts in best style at shortest notice and at competitive prices.

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And 10 ROOD LANE, off Eastcheap, LONDON, E.C.

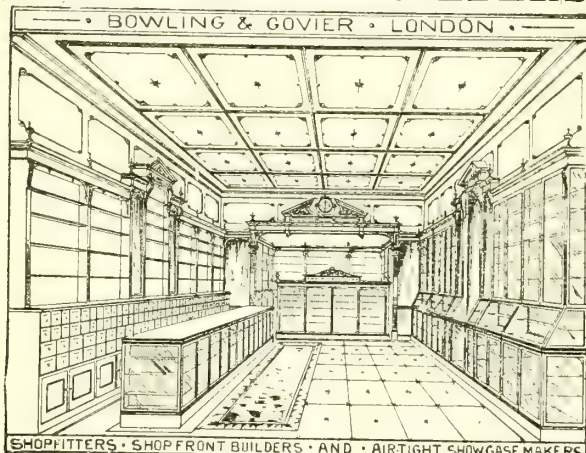
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SHOP FRONT BUILDERS.



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International  
Health Exhibition,  
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**MODERN & ARTISTIC DESIGNS**  
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(CLARK'S PATENT)

A Necessary for all Invalids.  
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All injurious vapours are reduced to harmless liquid inside the Stove, and passed out at foot into a tray provided for that purpose.

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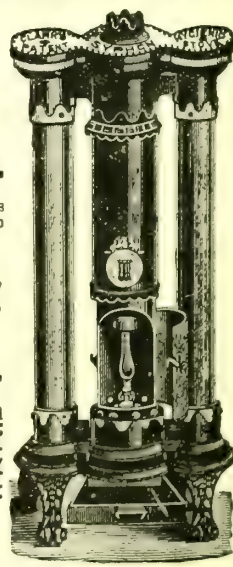
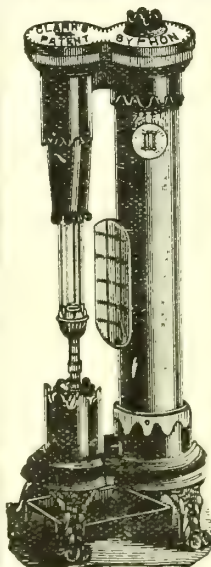
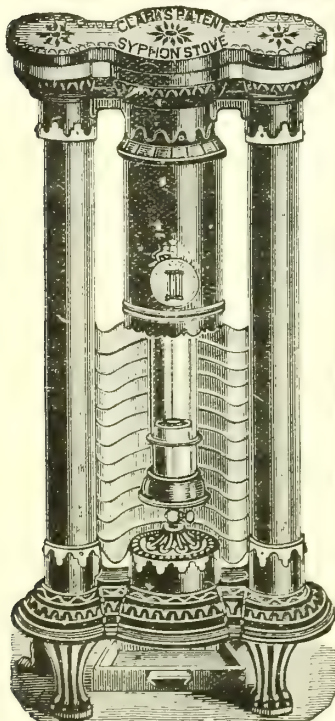
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*Gairard Baker*

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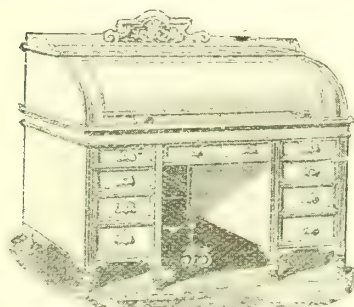
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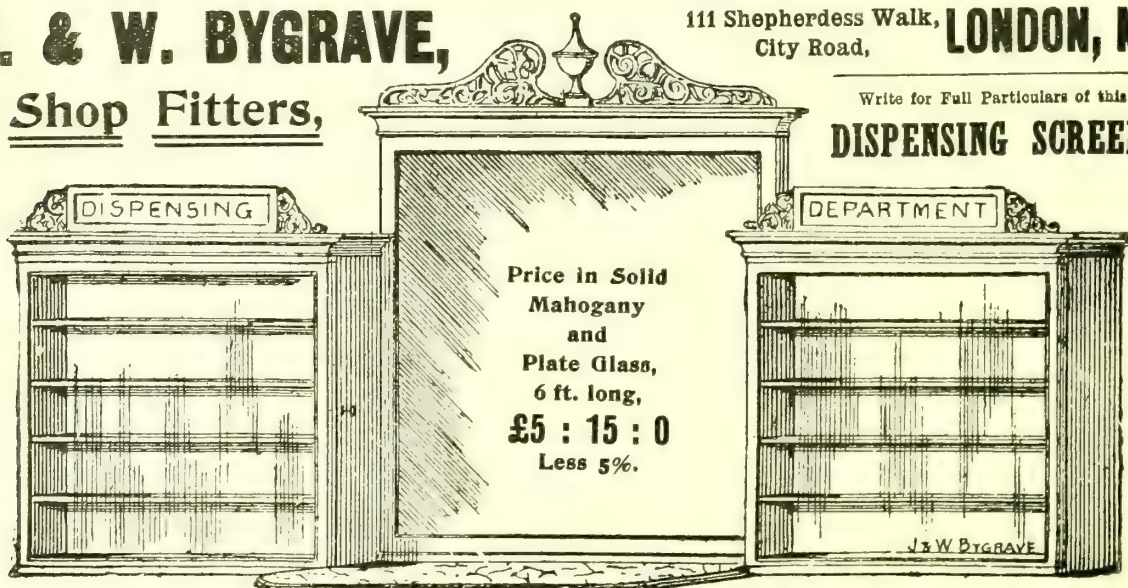
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City Road,

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**DISPENSING SCREEN.**

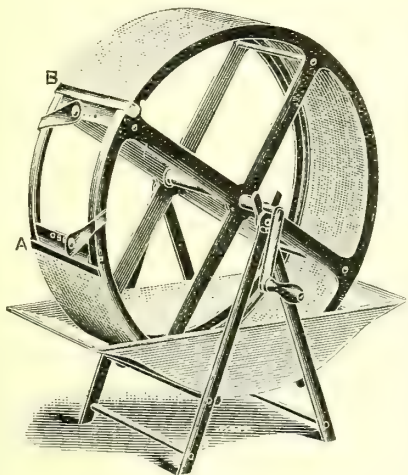




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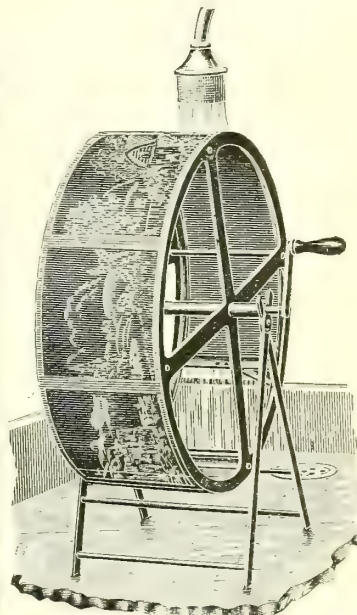


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The "Volvo" Developing Apparatus consists of the whole of the Outfit necessary for Developing, Fixing, Washing, and Drying.

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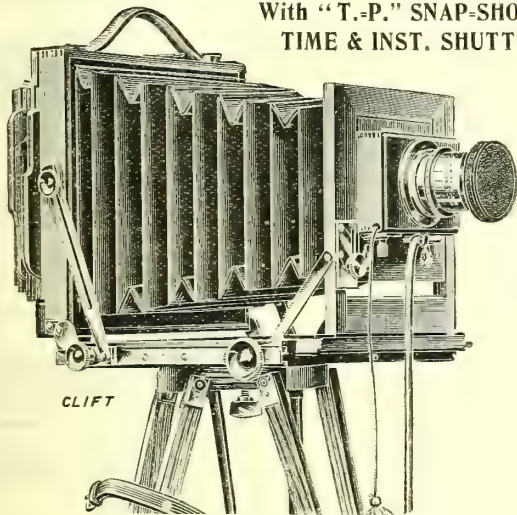
No.	Width of Wheel	To Develop	Complete Apparatus (each)
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		or	
		6 or less Exposures, 4½" × 2½"	
2	3½"	6 or less Exposures, 3½" × 3½"	16/6
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Showing Operation of Washing.

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With "T.-P." SNAP-SHOT or TIME & INST. SHUTTER.



CLIFT

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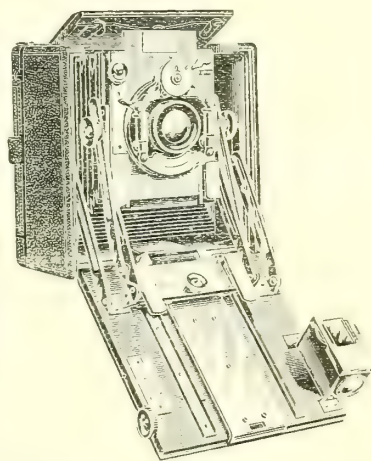
The "Sanderson" Hand Camera is now supplied fitted with

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Prices from

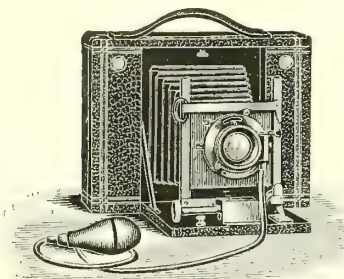
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The Best Lens fitted on the Lightest Camera.

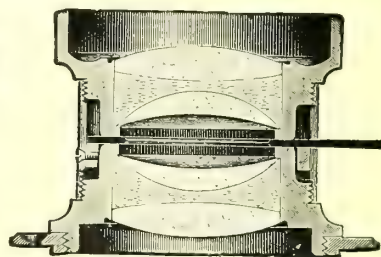


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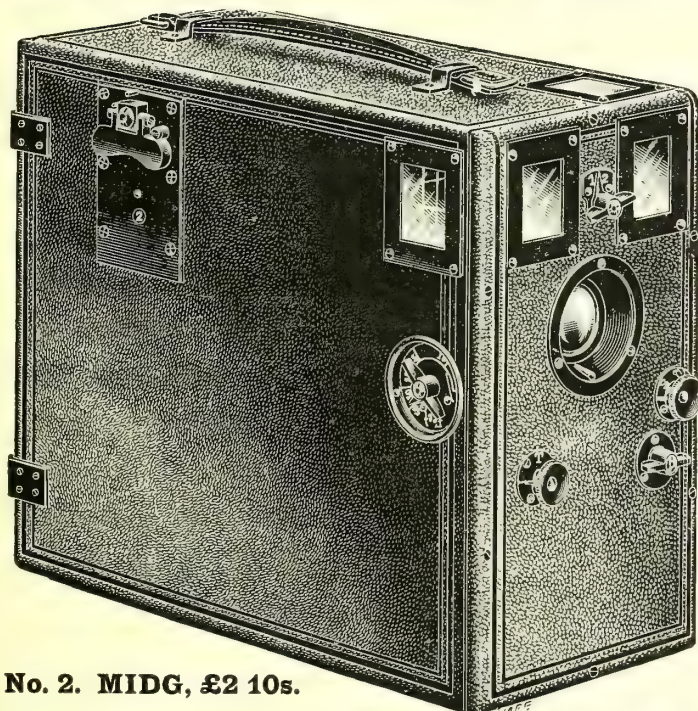
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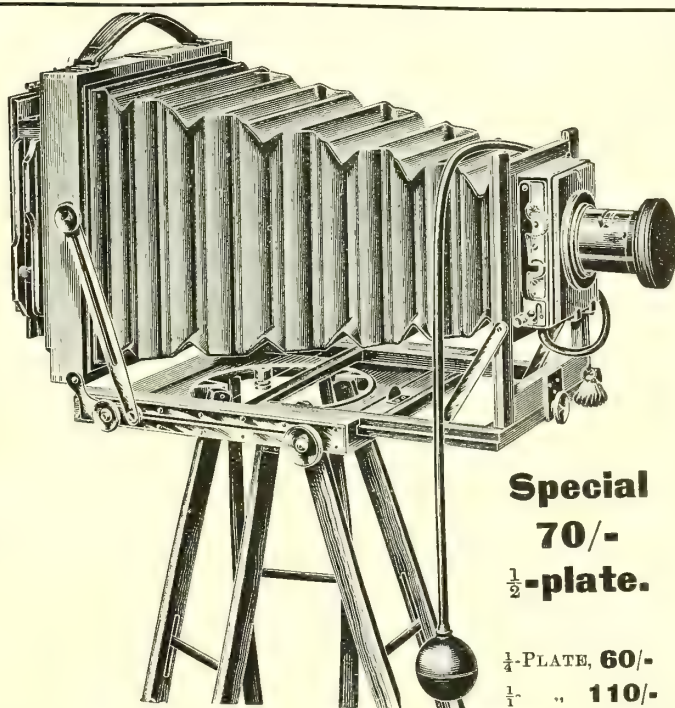
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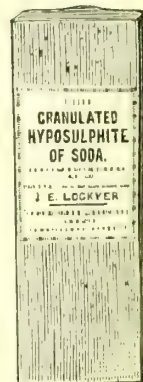
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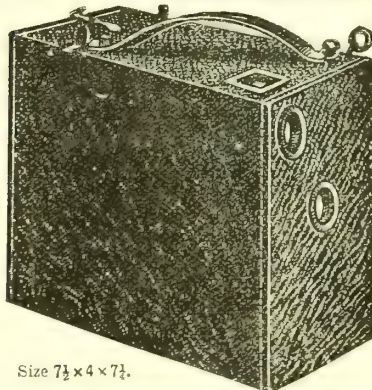
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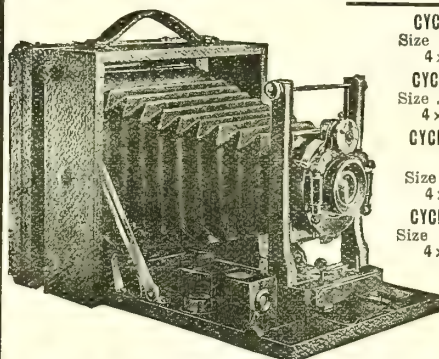
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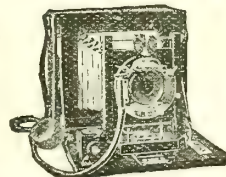
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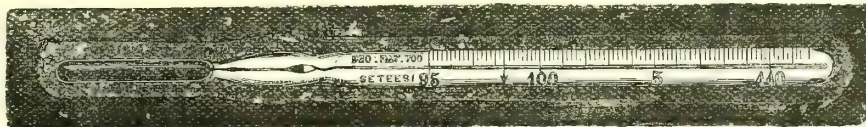
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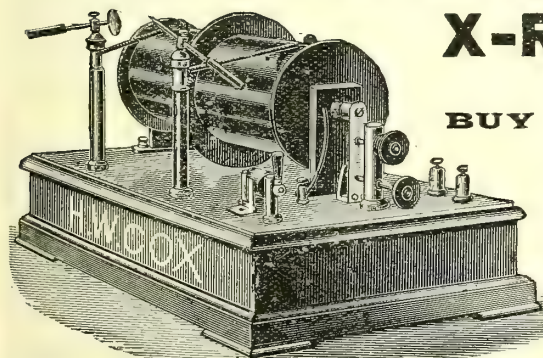
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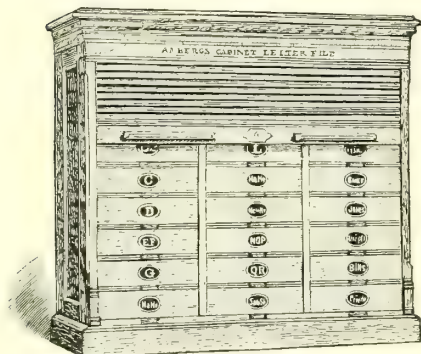
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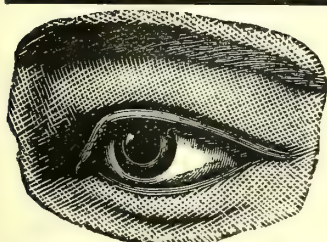
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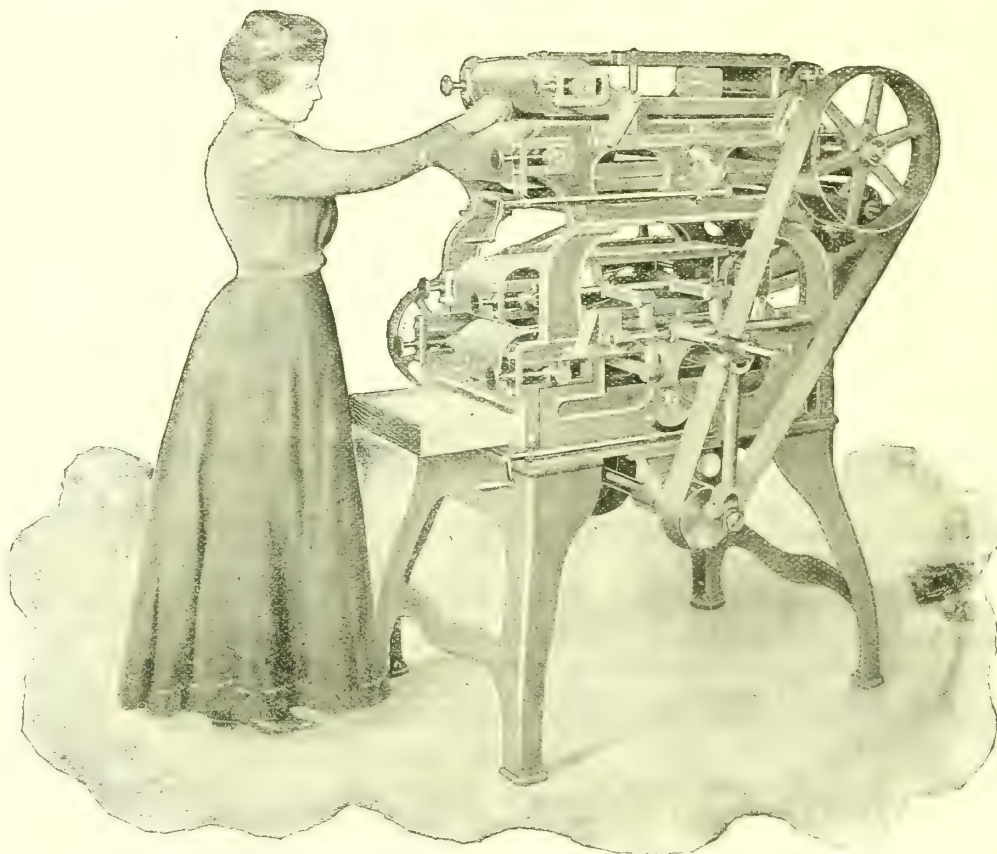
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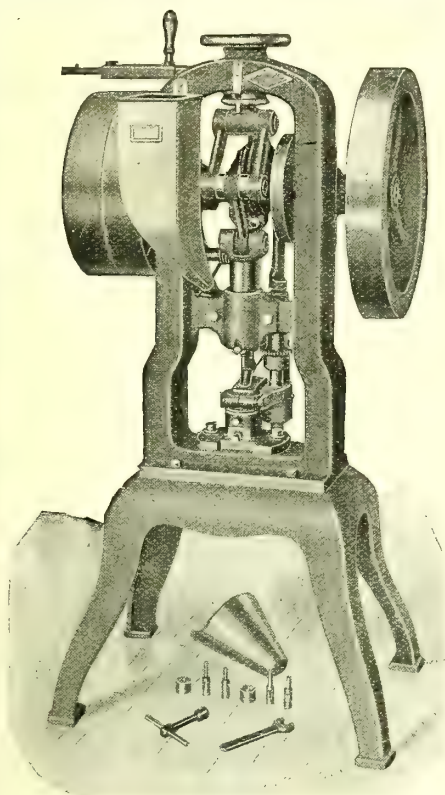
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**W**E once were of the opinion that all things were not possible, but as the years go by we are forced to change our previous erroneous conclusions, and will frankly admit that in these modern days of invention all things that are necessary to the welfare of mankind may be sought out through mechanical movements, and when one understands there are but two movements, a straight or curved action, the above statement becomes more difficult to comprehend, yet throughout all the diversified variations in mechanical research, we have but these two movements, through which it is possible to arrive at a desired resultant.

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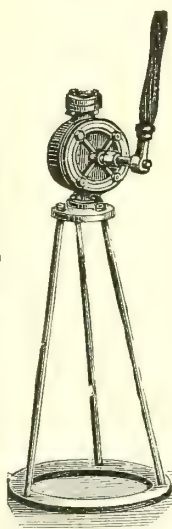
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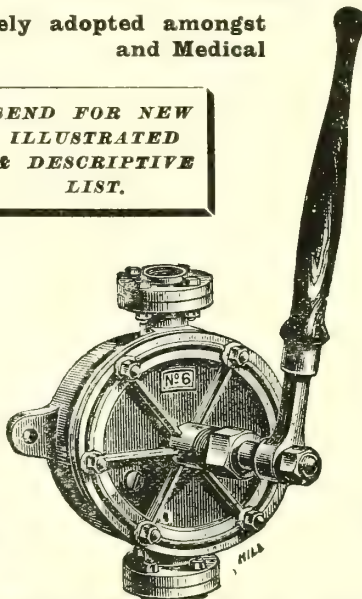
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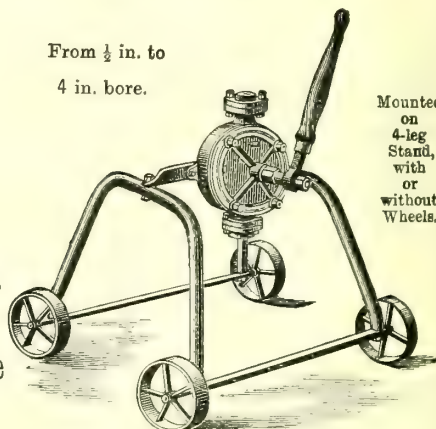
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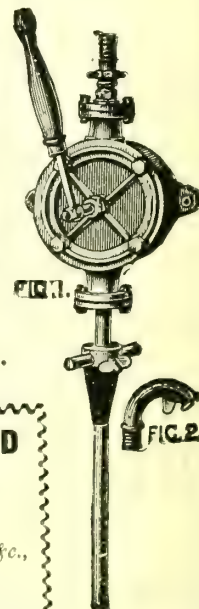
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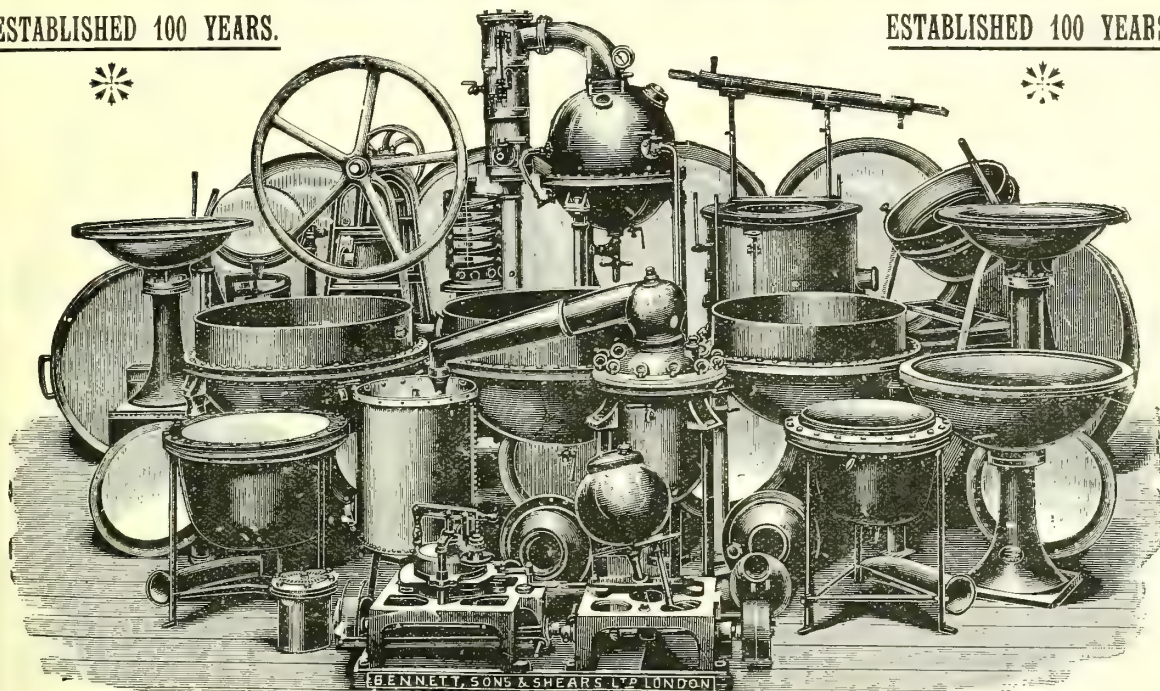


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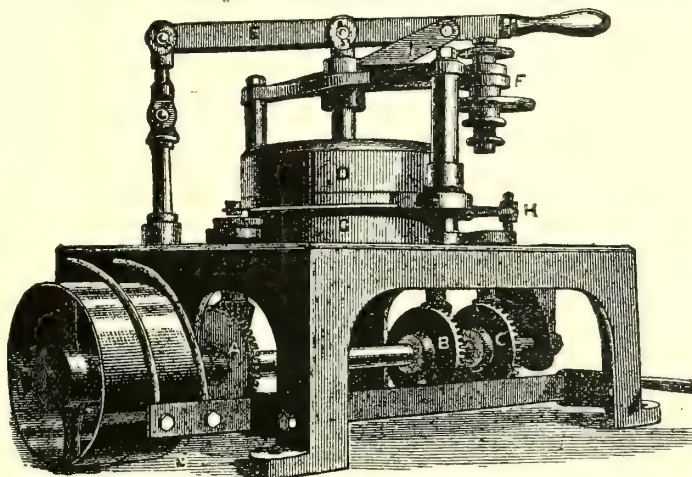
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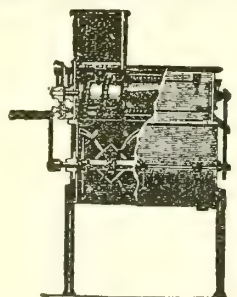


Fig. 1.

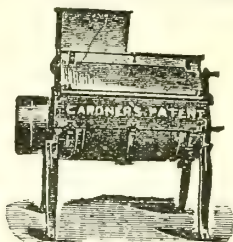


Fig. 2.

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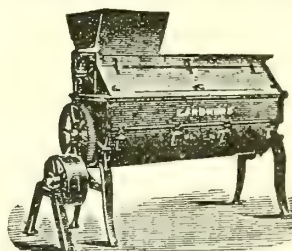


Fig. 3.

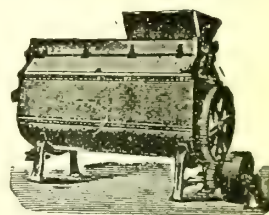


Fig. 4.

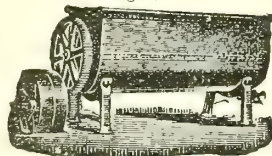


Fig. 11.

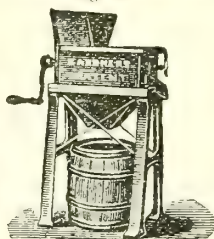


Fig. 9.

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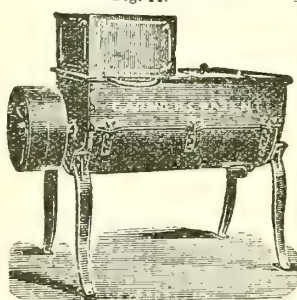


Fig. 12.



Fig. 6.



Fig. 8.

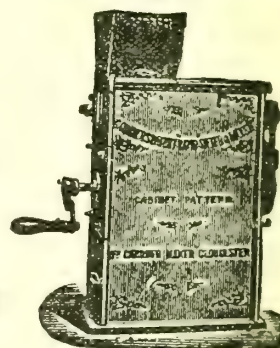


Fig. 5.



Fig. 10.

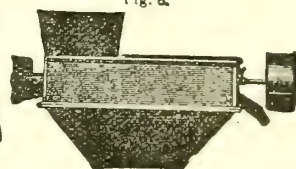


Fig. 7.

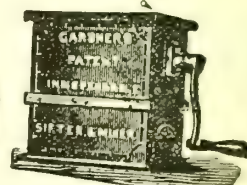


Fig. 13.

## PRICES AND CAPACITIES OF PATTERNS ABOVE.

### COMBINED "RAPID" SIFTER & MIXER (Standard Pattern)

| Size | Capacity in lbs. about | Fig. 1 Hand Sizes | Fig. 2 Power Sizes with Pulleys. | Figs. 3 & 4 Gear Drive with Pulleys |
|------|------------------------|-------------------|----------------------------------|-------------------------------------|
| A    | 15                     | £ 8 0             | £ 8 0                            | £ 8 0                               |
| B    | 30                     | 11 0              | —                                | —                                   |
| C    | 60                     | 17 0              | 18 5                             | —                                   |
| D    | 100                    | 21 0              | 22 10                            | 24 10                               |
| E    | 150                    | Larger            | 24 15                            | 27 0                                |
| F    | 200                    | Sizes not recom-  | 29 16                            | 32 0                                |
| G    | 300                    | mended            | —                                | 41 0                                |
| H    | 560                    | —                 | —                                | 70 0                                |
| I    | 1120                   | for Hand          | —                                | 120 0                               |

### "RAPID" SIFTER ONLY

| Fig. 6 Open Bottom         | Fig. 7 Hopper Bottom | Figs. 8 & 10 Worm Bottom | Fig. 9 On Iron Stand |
|----------------------------|----------------------|--------------------------|----------------------|
| Pulleys for Sifters extra. |                      |                          |                      |
| £ s.                       | £ s.                 | £ s.                     | £ s.                 |
| 4 6                        | 6 0                  | 6 0                      | 6 10                 |
| 6 16                       | 6 15                 | 7 15                     | 8 0                  |
| 8 6                        | 9 10                 | 11 0                     | 11 0                 |
| 11 0                       | 12 10                | 15 0                     | 14 10                |
| 12 0                       | 14 0                 | 18 0                     | 16 0                 |
| 13 0                       | 15 10                | 17 5                     | 17 10                |
| 19 0                       | 22 0                 | 24 5                     | 24 10                |
| —                          | —                    | 35 0                     | —                    |
| —                          | —                    | 45 0                     | —                    |

### "RAPID" MIXER ONLY

| Fig. 11 Flat Top Pattern |              |            | Fig. 12 Hopper Top Pattern |            |
|--------------------------|--------------|------------|----------------------------|------------|
| For Hand                 | Pulley Drive | Gear Drive | Pulley Drive               | Gear Drive |
| £ s.                     | £ s.         | £ s.       | £ s.                       | £ s.       |
| 4 15                     | 10 10        | —          | 12 0                       | —          |
| 6 0                      | 13 10        | 15 10      | 15 5                       | 17 15      |
| 8 10                     | 14 15        | 17 0       | 18 15                      | 19 0       |
| 12 0                     | 17 0         | 20 0       | 19 0                       | 22 0       |
| —                        | —            | 27 10      | —                          | 30 10      |
| —                        | —            | 40 0       | —                          | —          |
| —                        | —            | 80 0       | —                          | —          |

Fig. 5. Patent "Rapid" Sifter and Mixer (Cabinet Pattern), Size A, capacity 15 lbs., £6 10s. each. Size B, capacity 30 lbs., £8 10s. each.  
Fig. 13. "Indispensable" Sifter and Mixer, for small users, Size No. 1, capacity 7 lbs., £2 10s. each. No. 2, capacity 14 lbs., £3 10s. each.

NOTE.—The "Indispensable" sifts and mixes powders only, and does not reduce lumps like the "Rapid" patterns.

All prices F.O.R. Gloucester.

For Shipping Orders, add 8 per cent. extra for Packing and Delivering F.O.B. London.

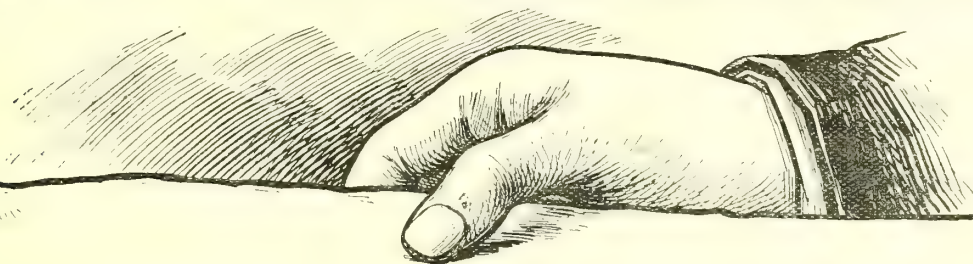
Powder Mixing and Drying Machines, Machines for Mixing Liquids and Essences with Powders, "Quick Change" Dressers for the Finest and Coarsest Grades of Powders, Grinding Mills for Crystals, Sugar, &c.

# WM. GARDNER & SONS.

Specialists in Sifting and Mixing Machinery, BRISTOL ROAD, GLOUCESTER, ENGLAND.

10 PER CENT. TO BE ADDED TO ALL ABOVE PRICES TO COVER INCREASED COST OF LABOUR AND MATERIALS.

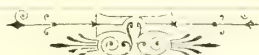




*"Your Own Speciality."*

# Toilet Soaps

Stamped with fancy name or Chemist's name & address.



A high-class Toilet Soap is one of the best lines for introduction as a Chemist's own proprietary, and will well repay the slight trouble it entails. It should, however, be of the very best manufacture to insure success.

Allen & Hanburys can supply Chemists with the finest quality milled Toilet Soaps, made from pure edible fats and guaranteed free from all adulterants, free caustic alkali or injurious colouring matters. They are delicately perfumed, and being superfatted are suited to the most tender skins or for nursery use.

Full particulars of the Allenburys Medical Soaps on application. Also samples for distribution to local medical men.



In cardboard boxes and carton cases to hold 3 tablets, with customer's name and address.

In wooden boxes of 3 doz. tablets.

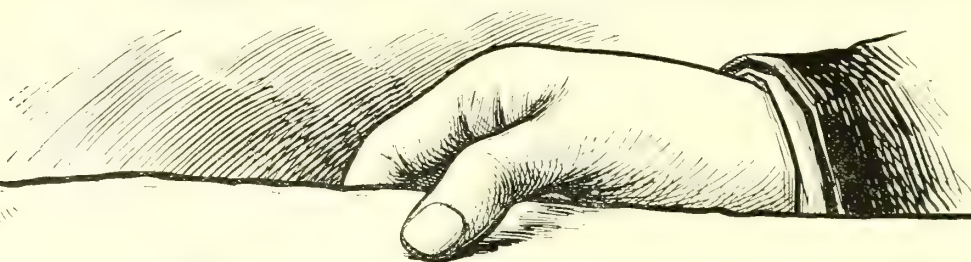
Designs Registered.



Write for Samples and Prices to the Manufacturers,



Allen & Hanburys Ltd, Plough Court, Lombard St., London, E.C.



**"Your own Specialities."**

## Cod-liver Oil Emulsion.

WITH HYPOPHOSPHITES.

A very palatable Emulsion of finest Norwegian Cod-liver Oil, containing 50 per cent. of Oil in conjunction with the Hypophosphites of Lime and Soda. The Emulsion is permanent, and keeps well without deterioration.

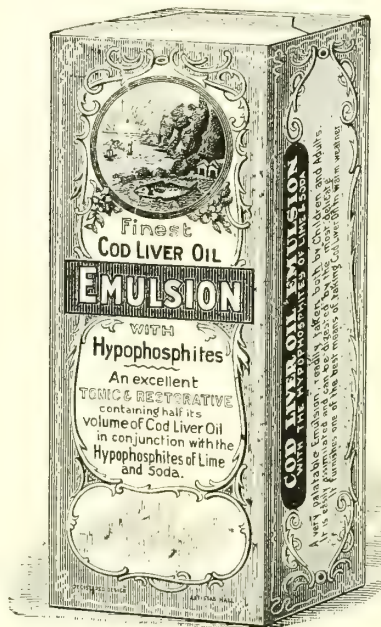


FIG. 1.

Put up in handsomely coloured cartons, as Fig. 1; in bottles bearing tinted lithographed labels, similar to Fig. 2 (Petroleum Emulsion); or in plain cartons, printed in black; all with Customer's name and address for orders of not less than 3 doz.

|                     | As Fig. 1. | As Fig. 2. | Plain Cartons, Printed. |
|---------------------|------------|------------|-------------------------|
| 8 oz., per doz. ... | 9/6        | 8/6        | 9/6                     |
| 12 oz. ,, ...       | —          | 11/6       | —                       |
| 16 oz. ,, ...       | 15/-       | 14/-       | 15/-                    |

## Petroleum Emulsion.

WITH HYPOPHOSPHITES.

A perfect Emulsion of Petroleum with the Hypophosphites. Very palatable and easily digested.

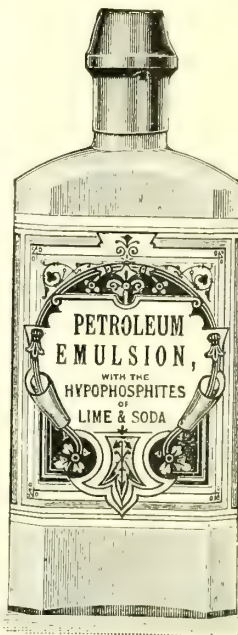


FIG. 2.

Put up in bottles bearing tinted lithographed label, as Fig. 2, or in plain printed cartons; all with Customer's name and address for orders of not less than 3 doz.

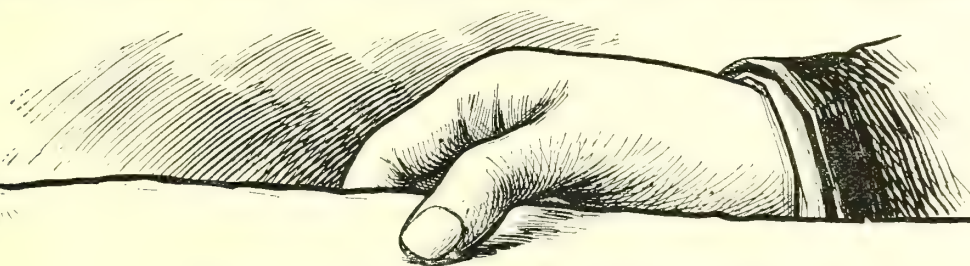
|                     | As Fig. 2. | Plain Cartons, Printed. |
|---------------------|------------|-------------------------|
| 8 oz., per doz. ... | 7/-        | 8/-                     |
| 12 oz. ,, ...       | 11/-       | 12/-                    |
| 16 oz. ,, ...       | 13/6       | 14/6                    |

DESIGNS REGISTERED. COMPLETE CATALOGUE ON REQUEST.



**Allen & Hanburys Ltd**, Plough Court, Lombard St., London, E.C.





**“Your own Speciality.”**

## MALT EXTRACT & COD-LIVER OIL.

A perfect amalgamation of Cod-liver Oil with an active Malt Extract. Free from taste of Cod-liver Oil. The assimilation of the Oil is rendered easier, whilst the active Malt Extract promotes the digestion of farinaceous foods.



FIG. 1.

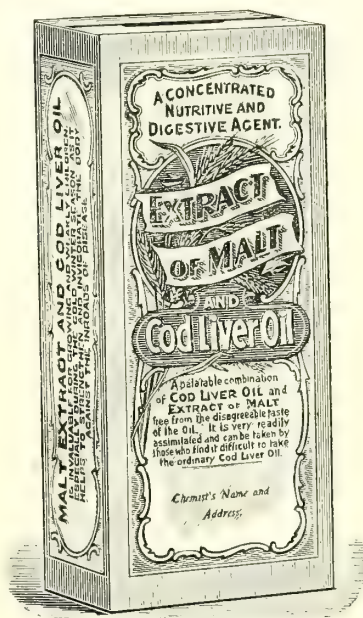


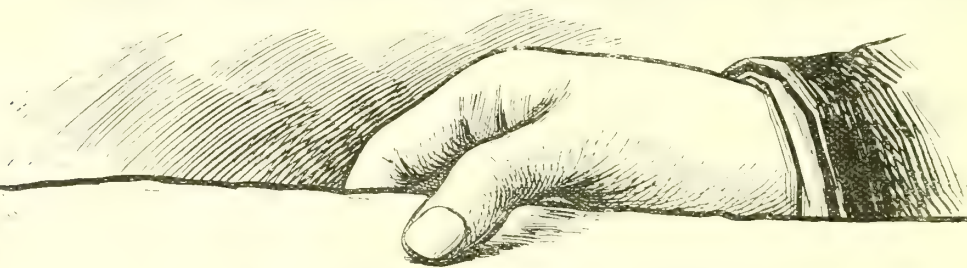
FIG. 3.

Put up in handsomely coloured cartons as Fig. 1, or in cartons in black on toned ground, as Fig. 3, with customer's name and address for orders of not less than 3 doz. Also in wide-mouthed amber-coloured bottles, bearing tinted lithographed label.

|                                               | In Carton<br>as Fig. 1 | In Bottles<br>without Carton | In Cartons<br>as Fig. 3 |
|-----------------------------------------------|------------------------|------------------------------|-------------------------|
| Malt Extract and Cod-liver Oil, 6 oz. (Fluid) | —                      | 6/- per doz.                 | —                       |
| „ „ 8 oz. „                                   | 9/- per doz.           | 8/- „                        | 9/- per doz.            |
| „ „ 10 oz. „                                  | —                      | 10/- „                       | —                       |
| „ „ 12 oz. „                                  | 12/6 „                 | 11/6 „                       | 12/6 „                  |
| „ „ 16 oz. „                                  | 16/6 „                 | 15/6 „                       | 16/6 „                  |
| „ „ 24 oz. „                                  | —                      | 22/- „                       | —                       |

DESIGNS REGISTERED. MALT EXTRACT IS SUPPLIED IN SIMILAR STYLES.

**Allen & Hanburys Ltd**, Plough Court, Lombard St., London, E.C.



**"Your own Speciality."**

# Tablets of Compressed Drugs.

Of superior finish and guaranteed purity.

**INSOLUBLE SALTS.**—These are so manufactured as to rapidly disintegrate on coming into contact with moisture.

Tablets for the **throat and mouth** are so compressed as to dissolve slowly, thus producing a steady flow of the drug over the affected parts.

**Nauseous Drugs** can be had sugar-coated (Fig. 2).

All Tablets are supplied in bulk, or nicely put up in vinaigrette bottles (as Fig. 1). A few kinds, as CHLORATE OF POTASH and VOICE, are also put up in small tin boxes.

Chemist's name and address on labels for orders of three dozen and upwards.



FIG. 1.



FIG. 2.

## PRICES IN SCREW-CAPPED BOTTLES.

| Per doz.                              |      | Per doz.                        |      | Per doz.                              |      |
|---------------------------------------|------|---------------------------------|------|---------------------------------------|------|
| Acid. Salicylic, gr. 3, 25 in bot. at | 3/-  | Easton's Syrup—                 |      | Quinin. Bisulph. gr. 4, 50 in bot. at | 11/6 |
| Aloin Comp. .... 25 "                 | 4/-  | Eq. 1 dram Syrup 100 in bot. at | 18/- | " " 100 "                             | 22/4 |
| Aloin " Cascara .... 50 "             | 8/-  | Ergotin, gr. 1/2 ..... 30 "     | 9/-  | " " 5, 24 "                           | 7/2  |
| " " " 100 "                           | 7/3  | Grey Powder ..... 100 "         | 4/-  | " " 50 "                              | 13/2 |
| Ammon. Brom. gr. 5, 25 "              | 12/- | " " 100 "                       | 2/6  | " " 100 "                             | 26/4 |
| Ammon. Chlor. gr. 3, 30 "             | 3/6  | Ichthyol. gr. 1/2 ..... 100 "   | 28/- | Quinin. Sal. .... 2, 25 "             | 6/2  |
| " " 100 "                             | 7/6  | Kola ..... 25 "                 | 3/6  | Rhubarb. .... 5, 25 "                 | 3/2  |
| Antifebrin, gr. 5 ..... 25 "          | 3/6  | Laxative ..... 100 "            | 10/6 | Rhubarb & Ginger .. 25 "              | 3/-  |
| " " 100 "                             | 6/6  | Lithii Salicylas, gr. 5, 25 "   | 5/-  | Rhubarb, Ginger, and                  |      |
| Antipyrin <i>Korr.</i> gr. 5, 24 "    | 3/6  | " Citras. .... gr. 3, 25 "      | 5/6  | Soda ..... 25 "                       | 3/-  |
| " " 100 "                             | 6/3  | Morphia Sulp., gr. 1/2 100 "    | 8/-  | Rhubarb Powder Co. 25 "               | 4/6  |
| Aromatic Confection                   |      | Nasal ..... 50 "                | 8/-  | Saccharin, gr. 1/2 ..... 100 "        | 15/4 |
| with Opium ..... 25 "                 | 3/6  | Pepsine, gr. 2 1/2 ..... 25 "   | 4/-  | " " 200 "                             | 10/6 |
| Bismuth, Pepsin, & Charcoal,          |      | " " ..... 40 "                  | 7/-  | " " 300 "                             | 23/0 |
| gr. 2 gr. 1 gr. 2                     |      | Phenacetin, gr. 5 ..... 25 "    | 3/3  | Salicine, gr. 5 ..... 15 "            | 4/6  |
| 25 in bot. at                         | 7/2  | " " ..... 50 "                  | 5/-  | " " 25 "                              | 6/6  |
| Bismuth Subnit. gr. 5 15 "            | 3/9  | " " ..... 100 "                 | 8/6  | Salol, gr. 5 ..... 25 "               | 3/3  |
| " " 25 "                              | 0/6  | Phenacetin et Caff. Cit.,       |      | " " ..... 50 "                        | 5/2  |
| Bismuth, Soda                         |      | gr. 4 gr. 1 16 "                | 2/8  | " " ..... 100 "                       | 9/-  |
| and Ginger " 15 "                     | 3/9  | " " 25 "                        | 3/2  | Soda Bicarb., gr. 5 .. 40 "           | 3/6  |
| " " 25 "                              | 0/0  | " " 35 "                        | 4/4  | " " 100 "                             | 5/-  |
| Blaud, gr. 5 ..... 30 "               | 3/6  | " " 50 "                        | 5/9  | Soda Mint, gr. 5 .... 20 "            | 2/2  |
| " " 100 "                             | 7/-  | " " 100 "                       | 10/- | " " 50 "                              | 2/6  |
| Caffeine & Antipyrin,                 |      | Phenacetin & Codeia             |      | " " 100 "                             | 4/-  |
| gr. 1 gr. 4 24 "                      | 11/6 | gr. 5 gr. 1/2 25 "              | 5/4  | Sodii Bromid., gr. 5 20 "             | 4/-  |
| Caffein Citrate, gr. 2, 25 "          | 5/-  | " " 100 "                       | 12/0 | " Sulphas. .... 100 "                 | 6/9  |
| " Hbrm., gr. 5, 30 "                  | 8/-  | Pot. Bicarb., gr. 5 .. 40 "     | 3/6  | " Nitrite, gr. 2 1/2, 25 "            | 4/-  |
| Casc. Sagrada, gr. 2, 25 "            | 3/2  | " " 100 "                       | 5/-  | Sod. Salicylate gr. 5, 25 "           | 4/6  |
| " " 50 "                              | 5/6  | Pot. Chlor., gr. 5 .... 20 "    | 1/10 | " " 50 "                              | 7/-  |
| " " 100 "                             | 7/6  | " " 100 "                       | 2/3  | " " 100 "                             | 13/6 |
| " " 140 "                             | 10/- | Pot. Chlor. & Borax 40 "        | 3/6  | Sulphonol, gr. 5 .... 25 "            | 7/-  |
| " gr. 5, 40 "                         | 6/4  | Potass Citrate ..... 25 "       | 3/-  | " " 50 "                              | 12/- |
| Cocaine, gr. 1/20 .... 24 "           | 19/6 | Quinin. Bisulph. gr. 1/2 50 "   | 4/8  | " " 100 "                             | 22/- |
| Digestive, gr. 6 ..... 25 "           | 3/9  | " " 100 "                       | 8/3  | Sulphur Comp. .... 25 "               | 2/6  |
| Dover's Powder, gr. 5, 18 "           | 3/6  | " gr. 1, 36 "                   | 4/2  | " " 50 "                              | 4/-  |
| " " 100 "                             | 13/6 | " " 100 "                       | 9/4  | Thyroidin, gr. 2 1/2 ..... 25 "       | 5/-  |
| Easton's Syrup—                       |      | " gr. 2, 24 "                   | 3/10 | " gr. 4 ..... 25 "                    | 6/6  |
| Eq. 1/2 dram Syrup.. 60 "             | 7/-  | " " 50 "                        | 7/2  | " " 100 "                             | 12/6 |
| " " 100 "                             | 11/4 | " " 100 "                       | 13/- | Tinct. Quin. Ammon 25 "               | 7/-  |
| Eq. 1 dram Syrup.. 25 "               | 5/6  | " gr. 3, 24 "                   | 5/2  | Voice ..... 30 "                      | 3/9  |
| " " 40 "                              | 2/-  | " " 50 "                        | 9/4  | Warburg's Tincture,                   |      |
|                                       |      | " " 100 "                       | 13/4 | min. 30, 25 "                         | 7/-  |
|                                       |      | " gr. 4, 24 "                   | 1/2  | " " 100 "                             | 24/- |

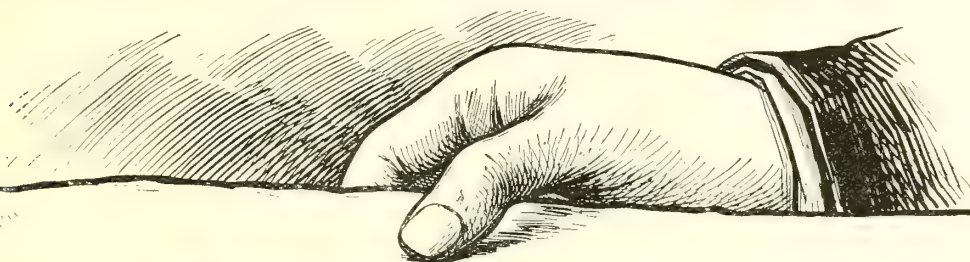
For full list of Tablets and for prices in bulk see general drug price list.

POT. CHLOR., POT. CHLOR. ET BORACIS, and VOICE, in metal boxes, at 4/- per dozen.



**Allen & Hanburys Ltd, Plough Court, Lombard St., London, E.C.**





**"Your own Specialities."**

## Compound Syrup

OF THE

## Hypophosphites

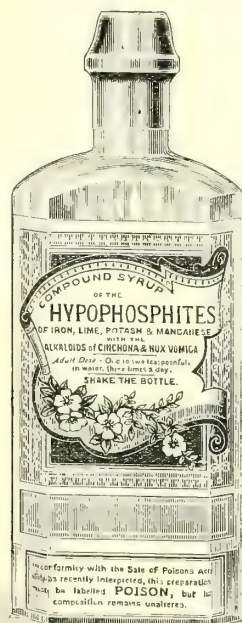
OF

Iron, Lime, Potash, and Manganese,

WITH THE

Alkaloids of Cinchona and Nux Vomica.

A palatable preparation which keeps well and commands a ready sale.



Put up in 3 oz., 4 oz., 6 oz., 8 oz., and 16 oz. bottles, bearing tinted lithographed label with Chemist's name and address, as figured, for orders of not less than 3 dozen.

|                  |     |     |                   |
|------------------|-----|-----|-------------------|
| In 3 oz. bottles | ... | ... | at 5/9 per dozen. |
| " 4 oz. "        | "   | "   | " 7/- "           |
| " 6 oz. "        | "   | "   | " 9/6 "           |
| " 8 oz. "        | "   | "   | " 12/- "          |
| " 16 oz. "       | "   | "   | " 18/- "          |

## PHOSPHORISED Quinine and Iron Tonic.

An excellent preparation of these valuable tonics, which keeps well and does not throw down a deposit.

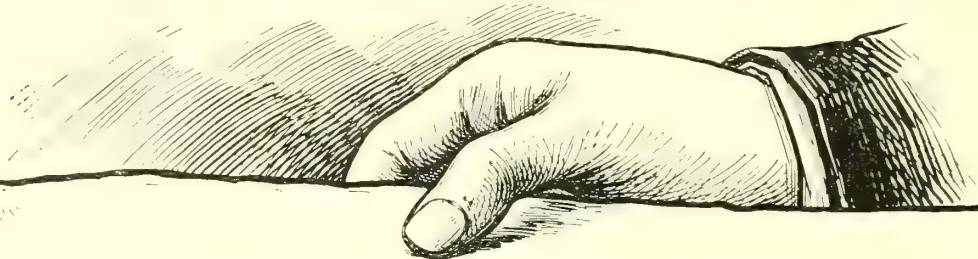


Put up in 4 oz., 8 oz., and 16 oz. flat bottles, bearing tinted lithographed label with Chemist's name and address for orders of not less than 3 dozen.

|                  |     |     |                   |
|------------------|-----|-----|-------------------|
| In 4 oz. bottles | ... | ... | at 3/6 per dozen. |
| " 8 oz. "        | "   | "   | " 6/- "           |
| " 16 oz. "       | "   | "   | " 10/6 "          |

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**Allen & Hanburys Ltd**, Plough Court, Lombard St., London, E.C.



“Your own Speciality.”

# Effervescent Saline

IN MINUTE GRANULES.

A superior anti-febrile Saline, which in dissolving gives a sustained effervescence and forms a bright solution of very agreeable flavour.

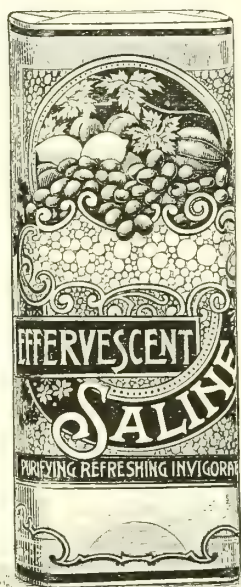


FIG. 1.

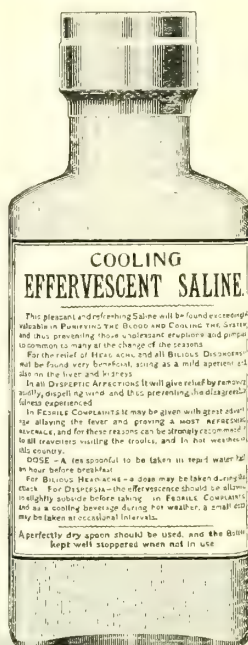


FIG. 2.



FIG. 3.

Put up in glass plug-stoppered Cheltenham, and wrapped in a handsome wrapper as Fig. 1 or Fig. 3, also with plain printed labels as Fig. 2, or coloured lithographed labels, all bearing Customer's name and address for orders of not less than 3 doz.

| EFFERVESCENT SALINE. |     |     |     | As Fig. 1.   | As Fig. 2. Plain or Litho labels. | As Fig. 3.   |
|----------------------|-----|-----|-----|--------------|-----------------------------------|--------------|
| In 6-oz. bottles     | ... | ... | ... | 6/6 per doz. | 6/6 per doz.                      | 6/6 per doz. |
| In 8-oz. „           | ... | ... | ... | 8/6 „        | 8/6 „                             | 8/6 „        |
| In 12-oz. „          | ... | ... | ... | 12/6 „       | 12/6 „                            | 12/6 „       |

DESIGNS REGISTERED. COMPLETE CATALOGUE ON REQUEST.

Allen & Hanburys Ltd, Plough Court, Lombard St., London, E.C.



Soapmakers by Special Warrant

TO

HER MAJESTY THE



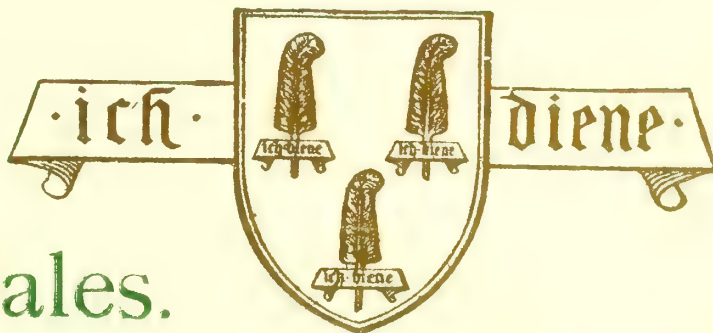
QUEEN

Pears

TO H.R.H.

The Prince

of Wales.



# PEARS

|                       |         |                                                       |   |       |                  |   |            |      |                   |
|-----------------------|---------|-------------------------------------------------------|---|-------|------------------|---|------------|------|-------------------|
| RETAIL PRICES.        | 6d.     | SIZE, unscented                                       | - | -     | -                | - | PER DOZEN. | 4s.  | WHOLESALE PRICES. |
|                       | 1s.     | ,, all shapes, Washing or Shaving                     | - |       |                  |   |            | 8s.  |                   |
|                       | 1s. 6d. | Ditto                                                 |   | ditto | -                |   |            | 12s. |                   |
|                       | 2s. 6d. | (The Washing Tablets are perfumed with Otto of Roses) | - |       |                  |   |            | 20s. |                   |
|                       | <hr/>   |                                                       |   |       |                  |   |            |      |                   |
| TRANSPARENT GLYCERINE |         | 2s. per Box of 3 Tablets                              |   | 16s.  | per dozen Boxes. |   |            |      |                   |

**DISCOUNT of 20 per Cent.**

On all ORDERS of NOT LESS than £5.

If accompanied by Remittance,

(Lesser quantities 15 per Cent. Discount only.)



## IMPORTANT STATEMENT.



No Dealer in the Kingdom, for any quantity whatever, obtains more than the above 20 PER CENT. Discount.

(Signed)

*A & F Pears Ltd.*

71-75, NEW OXFORD STREET, LONDON, W.C.



# PEARS

---

## 20 PRIZE MEDALS.

---

The highest possible distinction obtainable has been awarded in every competition at every International Exhibition, at home or abroad, since 1851.

---

## FULL PRICE LIST and SHOW CARDS

can be obtained on application.

---

### DEPOTS:

LONDON—71-75, New Oxford Street—LONDON.  
NEW YORK—365 & 367, Canal Street—NEW YORK.  
MELBOURNE—495-497, Bourke St.—MELBOURNE.

# 20 HIGHEST AWARDS.

*Representing the consensus of opinion of more than*  
**100 ANALYSTS or SOAPMAKERS,**  
the chief Experts of the world.

.....  
**The Modern "Judgment of Paris."**  
[Paris Exhibition, 1889.]



**ONLY GOLD MEDAL  
EVER AWARDED.**

.....  
**PEARS' Soap**

The only Gold Medal ever awarded  
**SOLELY FOR TOILET SOAP**  
at any INTERNATIONAL EXHIBITION in the world



# A DAINY BOOKLET

## FOR YOUR COUNTER.



COPYRIGHT

The Proprietors of "Frame Food"  
are prepared to supply copies of  
this booklet free, for distribution.

ATTRACTIVE FRAMED SHOW CARD will also be sent if desired.

FRAME FOOD COMPY., LTD., BATTERSEA, LONDON, S.W.

SEE OTHER SIDE.



A  
"FRAME FOOD"  
BABY

Mr. R. R. Griffiths, 4, Church Street,  
Wrexham, writes, October 11 99: -

"I BEG to send photo of our little boy, who has been fed on your Frame Making Food since he was three months old. Many have enquired on what he has been fed, and the answer is always 'Frame Food.' The photo was taken when he was nine months old, and he then weighed 20 lbs. naked. My wife has reared seven children on different foods; but she thinks more highly of 'Frame Food' than any other."



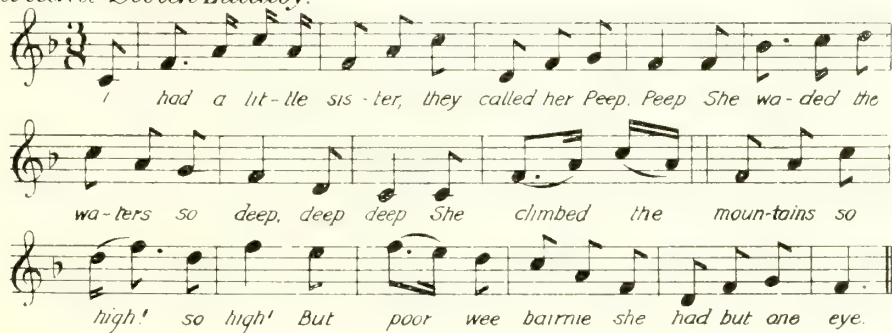
### *Damascus Lullaby:*



The e - vil eye won't harm you, you're safe in Al - lah's hand may  
she who would a - - larm you be like a burn - ing brand

The musical notation for 'Damascus Lullaby' consists of two staves in G major (one sharp) and 7/4 time. The melody is written in treble clef. The first staff contains the first line of the song, and the second staff contains the second line. The lyrics are written below the notes.

### *Lowland Scotch Lullaby.*



I had a lit - tle sis - ter, they called her Peep. Peep She wa - ded the  
wa - ters so deep, deep deep She climbed the moun - tains so  
high! so high! But poor wee bairnie she had but one eye.

The musical notation for 'Lowland Scotch Lullaby' consists of three staves in G major (one sharp) and 9/8 time. The melody is written in treble clef. The first staff contains the first line of the song, the second staff contains the second line, and the third staff contains the third line. The lyrics are written below the notes.

## **"FRAME FOOD,"** **for INFANTS AND INVALIDS**

Is a cooked food, rendered extraordinarily nourishing and strengthening by the addition to it of the *Phosphates*, Albuminoids and other nutritious matter extracted from wheat bran, it therefore contains all the organic constituents so vitally necessary for the full development of Infants and young children, and for building up the strength of Invalids. It replenishes the drain upon the maternal system of expectant mothers, with the best results for both mother and child; and nursing mothers are also greatly benefited in the flow and nutritive nature of their milk.

The price of "Frame Food" (16 oz. for 1/-) has been fixed with a view to bringing within the reach of all classes this really nourishing and digestible food. There is no food on the market which is at once so cheap and so good.

Sold in Tins, 1 lb. at 1/-; 4 lbs. at 3/9.

**"FRAME FOOD" JELLY**, like "Frame Food," contains the organic Phosphates and Albuminoids so necessary for the development of the Human Frame, and which invigorate and strengthen at every period of life. It possesses the nourishing and digestive properties of Malt Extract, but is much cheaper and more palatable; Children eat it readily, instead of jam, on bread or in puddings, &c.

Sold in air-tight Jars of about 1 lb. at 9d.



ANALYTICAL REPORTS and  
MEDICAL PRESS OPINIONS

Professor ALFRED W. STOKES, F.C.S., F.I.C., Public Analyst to Paddington, &c., in his analytical report on "Frame Food" says:—

"I am of opinion that this is a prepared food of high nutritive value. It contains no Alcohol, and Phosphates, and its readiness of easy assimilation, render it a valuable addition to our scanty stock of foods especially fitted for the use of children and invalids, and of infants of delicate digestion."

"... Hence I feel that it is a light, pleasant, and some and nutritious article of food. . . . . .  
Containing a digestive principle, known as diastase, it acts upon other foods, making them more easy of digestion."

"Lancet" says:

"The enrichment of cereal food with the soluble phosphate, which is otherwise thrown away in the bran, is a process worthy of all commendation. . . . The Frame Food Company manufacture a preparation called 'Frame Food,' in which the presence of a constant quantity of soluble phosphate derived from the bran may be relied upon."

“The Hospital” says:—

"The analysis of 'Frame Food' proves it to be

up of the tissues. We have ourselves made an excellent breakfast table. It is our purpose also to try it more extensively in the sick room. The food is admirable for the nursery, because it is so exceedingly palatable. . . . There is no doubt

Food "extract and sugar, and containing as it does Albuminoids, it must be regarded as a food largely endowed with the elements which go to build up and repair the tissues of the body. In itself it is highly digestible, but further than this, it is calculated to be taken with other foods taken at the same time."

“Medical Times and Hospital Gazette”  
says:

"Frame Food" is very palatable, easily

"Herald of Health" says:

as a health restorer than all the fluid meat  
that could be obtained from any source.

# TUG OF WAR

"FRAME FOOD" TEAM WINS EASILY



Four sturdy children.  
Sure as you're alive  
Reared on FRAME FOOD Diet  
Can beat any five

A High-Class Reproduction of the original Picture (of which the above is a reduced copy) beautifully printed in colours, will be sent for 4d. in stamps by the Frame Food Company, Ltd., Battersea, London, S.W.

The size of the picture is  $20\frac{1}{4}$  inches by  $15\frac{3}{4}$  inches, and to render it suitable for framing, the two lines of title are printed in the margin.





Frame Food Co.'s Motto:

# "Live and Let Live"

A LIVING PROFIT GUARANTEED



NO "CUTTING" ALLOWED.

HIGHEST DISCOUNT

GIVEN ON ORDERS OF £2 VALUE AND UPWARDS

## TRADE TERMS:

To retailers who sign and adhere to our Anti-Cutting Agreement we allow our

**Highest Discount of 10 per cent.**

on orders of £2 and upwards; and on orders of 10s. and under £2, a discount of 5 per cent.

**CASH to be sent with Order. All Goods sent Carriage FORWARD.**

Goods ordered by "SUTTON," "GLOBE," &c., or for enclosure to other firms, have to be forwarded from Battersea Carrier, and involve a charge for cartage and booking, the amount of which will be added to invoices of less than 10/-

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| "FRAME FOOD"        | s. d.<br>3 9                                                     | s. d.<br>3 5                                                     | s. d.<br>38 0 per dozen |
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| " " "               | 0 10                                                             | 0 9½                                                             | 8 3 " "                 |
| " " JELLY           | 0 9                                                              | 0 8½                                                             | 7 3 " "                 |
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| " " "               | 0 9                                                              | 0 8                                                              | 7 3 " "                 |

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These terms ensure to Retailers a **PROFIT** (on cost) of **over 30 per cent**

on all Goods sold at Advertised Prices, and a

**PROFIT of 20 per cent.** at Minimum Retail Price

FRAME FOOD CO., LTD., BATTERSEA, LONDON, S.W.



F. F.  
&  
Co.

# Vibrona Art Series






## BRITISH ART FOR BRITISH HOMES

IN THE following pages we give illustrations of the first four pictures of the **Vibrona Art Series**, which have been specially reproduced for us from the original paintings.

The pictures are sepias on fine plate paper, measuring 20 by 25 inches, and, in fidelity of outline and richness of tone, are equal to proof etchings costing several guineas.

We have received from all parts of the world letters expressing the highest admiration of the pictures already published. A few quotations from these will be found on page 4.

We have permission to publish the following from

**FREDK. GOODALL, Esq., R.A.,**  
the eminent painter of "Cranmer at Traitor's Gate."

"I beg you to accept my warmest thanks for the proofs of **the most excellent reproduction** from my picture of 'Cranmer at Traitor's Gate,' also for the proof of 'The Fighting Temeraire' which comes very fine indeed."

We have also received letters of thanks and critical appreciation from Sir Lawrence Alma-Tadema, R.A.; Briton Rivière, Esq., R.A.; James Sant, Esq., R.A.; and other distinguished artists.

*From "Printers' Ink Supplement," May 16th, 1900*

"The price of the pictures in the VIBRONA ART SERIES is simply nominal, and considering how delightful an adornment such pictures are, we should imagine the demand would be large, though no demand could be too large for their merit. What we specially admire in the way Messrs. Fletcher, Fletcher & Co. are publishing these pictures is the fact that they are not spoilt or made unfit for framing by any advertising matter, either back or front, and we think their self restraint is equally wise, artistically and advertisingly."

*From "The Lancet," May 26th, 1900.*

"We have received copies of the first two pictures of the VIBRONA ART SERIES, viz., 'Cranmer at Traitor's Gate' and 'The Fighting Temeraire,' Turner's masterpiece. Both are excellent reproductions on plate paper (20 inches by 25 inches), and are well worth framing. Although, presumably, issued as an advertisement of VIBRONA, this feature has commendably been ignored so far as the pictures themselves are concerned, only an inconspicuous word or two appearing on the reproductions to stamp them as being the outcome of commercial enterprise."

Each picture of the VIBRONA ART SERIES will be obtainable for the nominal sum of **half-a-crown**, and, on receipt of Postal Order or Stamps (foreign or otherwise), will be forwarded carefully packed and **carriage paid to any address within the United Kingdom, or any other Country in the Postal Union.** Framed copies can be supplied at seven-and-sixpence each (one shilling extra for packing) carriage forward.

**FLETCHER, FLETCHER & Co., Ltd., Holloway, London, N.**

**AUSTRALIA: 18 O'Connell Street, SYDNEY.**

**INDIA: 1 Grant's Lane, CALCUTTA.**



## Cranmer at Traitor's Gate.

Cranmer was committed to the Tower on September 12th, 1534, and was lodged in the Gatehouse, once known as the Garden Tower, and now as the Bloody Tower. He remained until March 1554 when he was removed to Oxford.

In Mr. Goodall's magnificent picture he is seen entering the fortress from the river through the Traitor's Gate.

"That gate misnamed through which he went Sidney, Russell, Raleigh, More."

*Vibrona Art Series, No. 1.*

CRANMER AT TRAITOR'S GATE.

After the painting by F. GOODALL, R.A., in South Kensington Museum.

*[Vibrona Art Series, No. 1.]*

## The Fighting Temeraire

*Tugged to her last berth to be broken up.*



On the right the setting sun producing effects in the sky of the utmost splendour, relieved by a small dark buoy in the foreground; on the left is the huge old ship of the line towed by a little black team tug. The cool misty distance between the gorgeous sky and the momentarily brilliant water is crowded with shipping.

The Temeraire, an old 98 (named after a French ship taken at Lagos Bay in 1759), was, under command of Captain Eliab Harvey, the second ship in Lord Nelson's division at the battle of Trafalgar, 1805; the Fougueur a French 74, became her prize in that engagement when the Temeraire had 47 hands killed and 76 wounded on board. She was sold out of the service at Sheerness on the 16th of August, 1838, and towed to Rotherhithe to be broken up.



*Vibrona Art Series, No. 2*

THE FIGHTING TEMERAIRE.

After the painting by J. W. M. TURNER, R.A., in the National Gallery.

*Vibrona Art Series, No. 2*



# Art Series.



[Vibrona Art Series, No. 3.]

## FLATFORD MILL.

After the painting by J. CONSTABLE, R.A., in the National Gallery.

[Vibrona Art Series, No. 3]

## Flatford Mill, on the River Stour.

On the left of the foreground a draught-horse, bestriden by a boy, stands on the towing path, while a man adjusts the rope by which it is attached to a barge floating in the weir, under the guidance of barge-men. On the right is an old and dilapidated oak tree; round the trunk of which a streamlet winds between sedgy banks. In the middle distance the river is intersected by a lock, surrounded by trees and farm buildings. Above, a sunny sky, across which large clouds are drifting.

## Ulysses Deriding Polyphemus.

The picture is illumined by green and crimson light of brilliant sunrise: The gorgeous gall of Ulysses is on the point of setting off from the island where the Cyclops Polyphemus dwelt. Close in shore are the remains of the fire in which he and his companions heated themselves off the giant, and which they put out his one eye when he slept. The monster is seen sprawling his huge body on the top of the cliff, tearing his hair with one hand, and writhing at the other, his whole body convulsed with impotent



[Vibrona Art Series, No. 4.]

## ULYSSES DERIDING POLYPHEMUS.

After the painting by J. M. W. TURNER, R.A., in the National Gallery.

[Vibrona Art Series, No. 4.]

# Appreciations.

**H.C.M., Bombay, writes:—**

"Enclosed please find Money Order for 2/6, for which kindly send me second picture in VIBRONA ART SERIES, viz., Turner's 'Fighting Temeraire.' No. 1 to hand by last mail and is excellent. I should be glad to receive the names of the remainder of the Series and when same will be ready."—April 14th, 1900.

**P.A.M., Auckland, N.Z., writes:—**

"Kindly send me copy of 'Cranmer at Traitor's Gate.' Stamps for 2/6 in payment enclosed. Should you be issuing any other pictures in the VIBRONA ART SERIES of equal merit, kindly forward to me until further advice, and I will at once remit cost."—March 5th, 1900.

**J.C., Digby, Nova Scotia, writes:—**

"I received the historic picture, 'Cranmer at Traitor's Gate,' yesterday. It is very fine, the faces are so life-like. When I get some more English silver I shall send for the second of the VIBRONA ART SERIES. The picture was splendidly packed, no danger of breakage or injury in transit."—March 31st, 1900.

**F.L., St. Petersburg, writes:—**

"The copy of 'The Fighting Temeraire' came duly to hand this morning. The picture pleases me very much, and if you contemplate issuing any more of the VIBRONA ART SERIES, I shall be glad to hear what subjects you intend to utilise."—May 18th, 1900.

**B.B., Dundee, writes:—**

"I was very pleased to get 'The Fighting Temeraire.' It is certainly one of Turner's most superb works, as well for noble truth of colour and tone, depth of light and shade, and fineness of sentiment. He painted it when he was 60 when at his maturist. I cannot but regard this presentment of it in the VIBRONA ART SERIES as a highly successful and really worthy reproduction of the splendid picture. It is an uncommonly rare bargain at 2/6."—April 9th, 1900.

**J.W.S., Cardigan, writes:—**

"I am so pleased with the first two pictures of the VIBRONA ART SERIES, that I hasten to order the third and fourth. Enclosed please find cheque 17/- to cover framing, etc."—July 6th, 1900.

**J.S., Erith, writes:—**

"I must express very heartily my admiration of the first two pictures of the VIBRONA ART SERIES which I have purchased. They are far better than I expected to receive, and when suitably framed will be objects of admiration fit for any home. I am certainly astonished that you can produce such high-class plates at such a remarkably low figure. Everyone to whom I have shown them expresses admiration, and I consider myself fortunate in having secured them."—July 5th, 1900.

**E.F., Fulham, writes:—**

"I am extremely grateful to you for the opportunity of obtaining such splendid reproductions of the famous pictures comprising Nos. 1 and 2 of your VIBRONA ART SERIES, and desire to express my admiration both for the pictures and also of your efforts."—June 8th, 1900.

**F.L.J., Pontypool, writes:—**

"I am exceedingly pleased with No. 1 VIBRONA ART SERIES which has been much admired. I should be very glad if you could let me have another copy of this picture, together with the second, third and fourth of the series for which I enclose Postal Order 10/-."—July 7th, 1900.

**A.E.R., Sheffield, writes:—**

"I received the sepia of 'The Fighting Temeraire' quite safely. I am much pleased with it. It surpasses anything I had anticipated. Would you be so kind as to send me the companion picture, 'Ulysses deriding Polyphemus,' for which you will find Postal Order 2/6 enclosed."—July 7th, 1900.

**J.B.H., Dollar, writes:—**

"Kindly forward at your earliest convenience No. 4 of the VIBRONA ART SERIES, for which please find Postal Order 2/6 enclosed. They are really works of art, and pictures anyone might be proud of. They are just as good as engravings which cost pounds instead of shillings."—July 6th, 1900.

**J.W.L., Regent's Park, writes:—**

"I wish to subscribe to all the pictures in your VIBRONA ART SERIES, for the reproductions are so beautifully conceived that I am never tired of admiring the two pictures which already grace my walls."—May 21st, 1900.

**P.McE., Hornsey Lane, writes:—**

"I am delighted with the second picture of the VIBRONA ART SERIES. It is a welcome addition to our collection, and when I tell you that it looks well beside a Bartolozzi you can understand how good it is. There is nothing so trying to modern pictures as juxtaposition with an old master's engraving."—April 2nd, 1900.

**W.A.S., Liverpool, writes:—**

"The VIBRONA ART SERIES pictures arrived this morning. They are such astonishing value that some of my colleagues here are anxious to become possessors of one or more of them. Will you therefore kindly send me one 'Flatford Mill,' two 'Ulysses,' and three 'Temeraire.' Postal Order 15/- herewith."—July 5th, 1900.

**FLETCHER, FLETCHER & Co., Ltd., Holloway, London, N.**

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| Cornhill Magazine                | Mission Field                       | South Kensington Museum Handbook        |
| Dental Students' Register        | Money                               | South Wales Institute's Proceedings     |
| Eastern Counties Magazine        | Morning Calm                        | Statist                                 |
| Edinburgh Review                 | National Church                     | Stock Exchange Official Intelligence    |
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For an Adult, one table-spoonful in a wine glassful of water, twice a day.  
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One or two tea-spoonfuls in water or peppermint water either at bed time, in the morning or whenever necessary.

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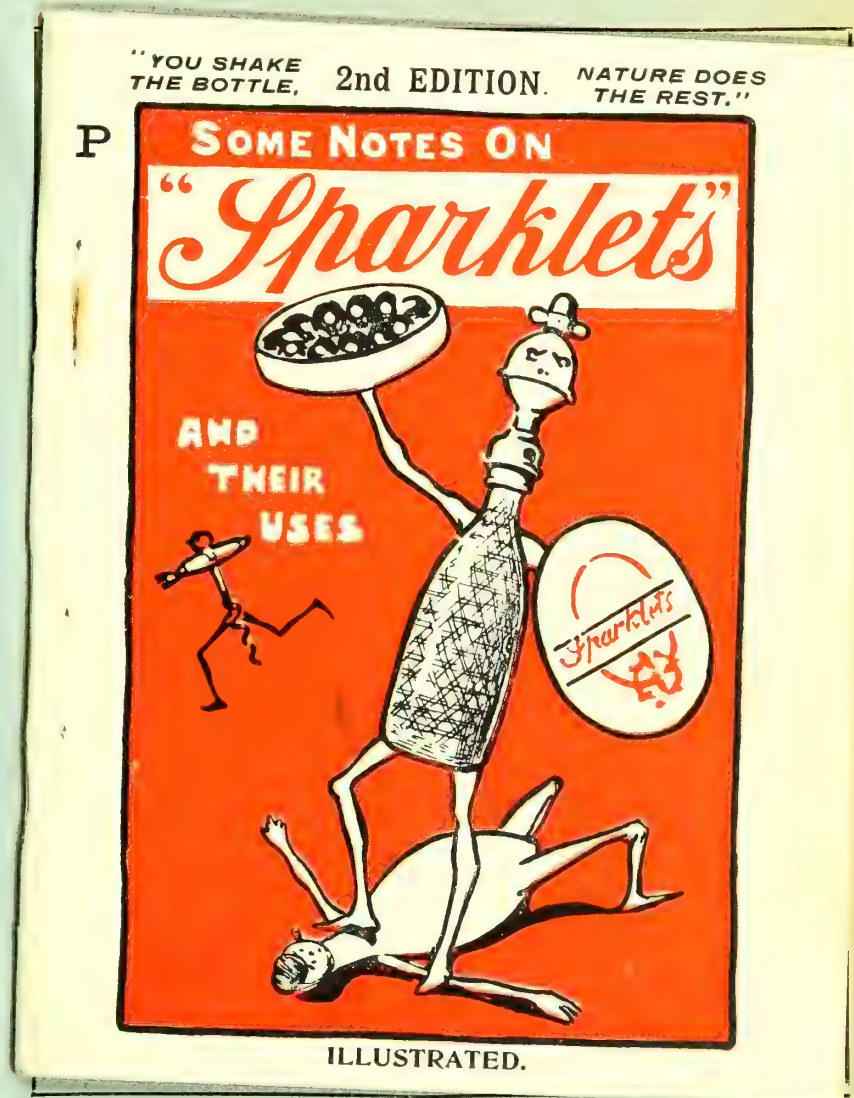
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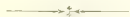


LONDON, APRIL, 1900.  
PUBLISHED BY AERATORS, LIMITED,  
BROAD STREET AVENUE, E.C.

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## PREFACE TO SECOND EDITION.



A complete year has passed since the issue of the first edition of these notes. Sparklets are now known and enthusiastically welcomed in all parts of the world, and familiarity with their use has conquered the early prejudices against them, prejudices due solely to acquired habits and to hostility to change of any kind.

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BROAD STREET AVENUE, E.C.,

*April, 1900.*

## PREFACE TO FIRST EDITION.



The general public drink aerated water and aerated beverages generally, as a matter of course, and it no more occurs to a drinker of brandy and soda, champagne, cider, whisky and appollinaris, lemonade, etc., to ask how the sparkle in his drink is produced than to ask the cause or origin of the countless other things which he daily uses, and which form for him as much a part of his life and environment as the sun, the rain, and the air he breathes.

Were it not for this indifference, the result of long-established usage, the present notes would not be required, and Sparklets would be immediately adopted and used by all, so simple is their use, so many and self-evident their advantages.

Carbonic Acid Gas is the *sole cause* of all the pleasure and benefits derived from aerated beverages. The present system provides the desired gas in cumbersome bottles, in which it is absorbed in a large volume of often unnecessary liquid. The new system furnishes the desired gas as a liquid, in a form portable beyond conception, and ready to be enjoyed as and when you will.

The use of Sparklets is so delightfully simple, their advantages so obvious, that, once used, they also become a habit, but a habit never to be eradicated.

Full and detailed particulars regarding Sparklets, their manufacture and uses, are given in the complete Illustrated Handbook (price 3d.), published by Aerators, Limited.

A copy of this handbook, which is beautifully illustrated, will be supplied free, till further notice, with each special bottle and stopper sold.

BROAD STREET AVENUE, E.C.,

April, 1899.



## SPARKLETS.

"Sparklets" are small steel receivers containing liquefied Carbonic Acid gas, and are used either to **directly aerate** any liquid **without dilution with water**, or to **produce the highest class of aerated waters**, mineral or otherwise, for adding to whisky, brandy and other liquids, or for drinking alone, etc.

Before proceeding to explain the manner in which Sparklets are employed, we will first consider the nature of Carbonic Acid gas, the cause and source of all aeration or effervescence, and what aeration means.

## CARBONIC ACID GAS.

This term is really a misnomer: the gas is Carbon Dioxide formed by the union of one atom of Carbon with two of Oxygen, and should be so called.

Carbon Dioxide neither burns nor supports combustion; it can be converted into a colourless liquid under a pressure of 36 atmospheres, say 540 lbs. to the square inch at a temperature of 32 degrees Fah., or at freezing point. In the manufacture of Sparklets the gas is liquefied at a temperature of 60 degrees Fah. by a pressure of about 900 lbs. to the square inch.

## AERATION.

Aeration may be produced naturally as well as artificially, but in considering liquids in a state of aeration or aerated, we refer

particularly to the artificial impregnation of liquids with Carbon Dioxide, and to the assisted absorption by a liquid of Carbon Dioxide, producing a state of aeration which displays its presence by the more or less minute bubbles of gas in the liquid and by strong effervescence when the pressure is removed either by removing the stopper or cork from the bottle or other vessel in which the aerated liquid is stored, or otherwise. At ordinary atmospheric temperature and pressure, water will absorb about its own volume of Carbon Dioxide, forming Carbonic Acid, the solution having a sharp and slightly acid taste. Ordinary so-called "soda water" generally consists of water impregnated or aerated with Carbon Dioxide under pressure, and often contains no soda whatever.

Effervescing or sparkling wines and beers, and all aerated waters, natural and artificial, mineral or otherwise, **owe their sparkling properties solely to the presence of Carbon Dioxide.**

The presence of **pure Carbon Dioxide** in excess in a liquid undoubtedly renders the liquid far more palatable, and not only imparts the special flavour and sparkle peculiar to champagne and similar wines, but greatly improves the taste of whisky, brandy and other beverages diluted with aerated water, or, in other words, with water in which Carbon Dioxide has already been absorbed.

**Carbon Dioxide stimulates the organs of the stomach, and is a powerful aid to digestion, assisting also to dissolve the mineral ingredients of the food. Carbon Dioxide has a brightening and revivifying effect on the system, stimulates the appetite, checks any tendency to nausea, and lessens the desire for spirits.**



## AERATED WATERS.

Natural waters impregnated with Carbon Dioxide to a marked extent occur in springs all over the world, many of them holding in addition various mineral salts in solution. Although the manufacture of aerated waters in their present perfection is an industry of comparatively modern origin, they are produced to-day in many varieties and in enormous quantities; their quality and purity varies very greatly, and only waters made by well-known makers are absolutely reliable. Great care and attention is given in the manufacture of these waters by the higher class manufacturers to ensure **pure Carbon Dioxide and pure water** being used, and **absolute cleanliness** being observed in all the operations.

The chief qualities looked for in aerated waters are a pleasant flavour and brisk effervescence either when taken alone or when mixed with or added to spirits, wines, fruit syrups and other liquids, and for this reason the artificial waters when made by good makers are generally preferred to the natural, as the latter contain less Carbon Dioxide and are consequently less effervescent and refreshing.

## BALL STOPPERS AND THEIR BOTTLES.

Before dealing with the bottle and stopper, it is advisable to explain the general conditions and the objects aimed at in the design.

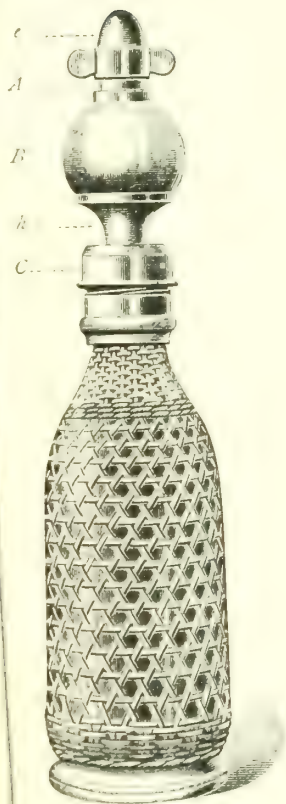
Each Spudlet contains sufficient liquid Carbon Dioxide to perfectly aerate a determined quantity of water—in the case of the

small Sparklet rather more than the contents of what is known as a large soda, and in the case of the large Sparklet nearly double that quantity. The Sparklet contains sufficient gas to produce this state of aeration and still leave a resultant or final pressure in the bottle of three to four atmospheres, the same as is usual in ordinary bottles of aerated water, but considerably less than in a syphon, which requires a higher final pressure to ensure the complete automatic discharge of its liquid contents. When the gas is liberated from a Sparklet into a bottle or other vessel containing water, the dimensions of the bottle being such that, when the gas is absorbed by and mixed with the water, the resultant or remaining pressure in the bottle shall be only that in an ordinary soda-water bottle, the initial or first pressure in the bottle if no immediate absorption of the gas took place would be in excess of this. The problem was then first to get rid of this excessive initial pressure and to start with a pressure in the bottle which should be about equal to the pressure usual in an ordinary syphon, and, secondly, to finish with a pressure the same as that in an ordinary bottle of good soda or other aerated water.

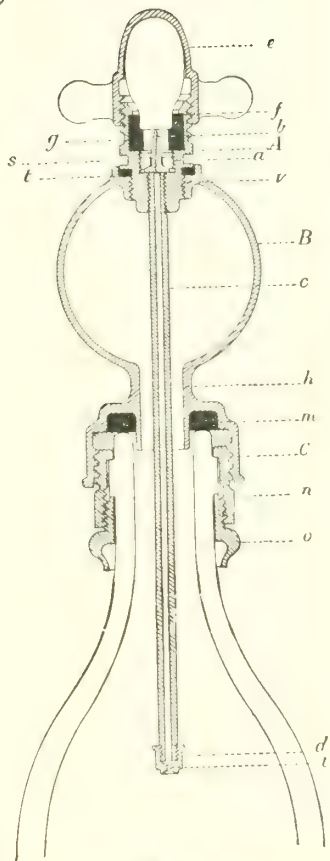
**The stopper** may be considered as consisting of three distinct portions, and its construction is clearly shown in Figs. 1, 2 and 3.

The first portion comprises the Sparklet holder (*A*) which receives the Sparklet, and at the bottom of which is screwed in the pin holder (*a*) holding in place the hardened steel pin (*b*) which is to pierce the Sparklet, thus allowing the gas to escape; the injection tube (*c*) with its nozzle (*d*) in connection with the base of the Sparklet holder, through which the liberated gas finds its way into the liquid, and by means of which any high initial pressure in the





*Fig. 1.*  
Elevation.



*Fig. 2.*  
Section.

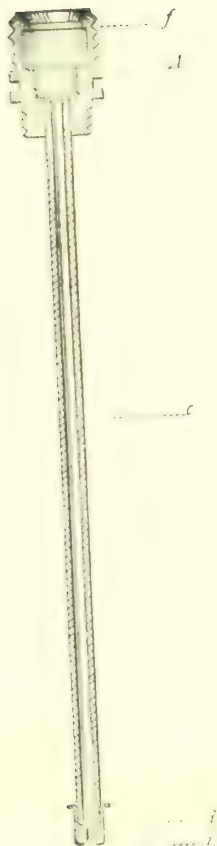


Fig. 3.  
A sparklet holder  
and injection tube.



Fig. 4.  
A small rectangular  
component.



Fig. 5.  
Enlarged view of pin  
holder.



Fig. 6.  
Enlarged view  
of pin.



Fig. 7.  
Enlarged view  
of pin head.



Fig. 8.  
Section through the cap.



Fig. 9.  
Section through  
sparklet washer.

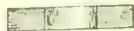


Fig. 10.  
Section through flat rubber washer  
for making joint with bottle.



bottle is entirely avoided, and finally the flycap or wing nut (*e*), a loose piece, the screwing on of which forces the Sparklet down on to the piercing pin. The Sparklet holder, together with the injection tube, is, as shown in Fig. 2, removable, or capable of being screwed in and out for greater facility in cleaning the stopper. The top of the ball is screwed to receive the thread at bottom of Sparklet holder (*g*), a washer is inserted at (*h*) to make the joint, and two flats are provided at (*i*), so that Sparklet holder may be screwed firmly into ball with the tool provided. The Sparklet holder, as will be seen, is slightly recessed at the point (*f*), and into this recess is slipped the outer edge of the small rubber washer (*g*) **turned inside out**. The object of this washer is to ensure the gas always finding its way when liberated through the slot in the pin (Figs. *b* and *b*<sup>1</sup>), and so through the injection tube into the liquid. If all the gas does not enter the bottle when piercing the Sparklet, **it shews that a proper joint has not been made, or that the washer is worn out, and must be changed and a new one substituted.**

The second portion comprises the ball (*B*), and the annular space between the same and the top of the bottle (*h*). When the gas enters the liquid through the nozzle (*d*) at the end of the injection tube, about one-half is immediately absorbed by the liquid, so that the initial pressure in the bottle does not exceed that usual in an ordinary siphon, the remaining gas, passing through the liquid, expands into and fills the ball and the annular space above the bottle, and any empty portion of the bottle itself should this not have been filled to the top. With a sharp shake or two of the bottle the pressure falls at once to that customarily retained in all the best aerated waters. The nozzle is provided with a minute hole (*i*),

through which the gas liberated from the Sparklet passes into the liquid with considerable velocity, the effect being to divide and break up both the liquid and the gas, exposing a large aggregate surface of liquid to a number of small globules of gas and so ensuring the ready absorption of the gas by the liquid ; if this hole were too large the gas would pass through the liquid in large globules and comparatively little immediate absorption would take place.

The third portion of the stopper (*C*) may be considered to comprise the rim at the base of the neck, or of the annular part below the ball, the inside of which carries the thread for screwing on to the metal ring on the bottle neck, and the washer (*m*) for making a tight joint with the top of the glass bottle when the stopper is screwed firmly down.

**The bottle** may also be divided into three parts, the two rings on the neck (*n* and *o*), the covering and the glass bottle itself. The cane covering is quite unnecessary if the bottle is looked after, but as it is impossible, as a rule, to ensure proper care, and the bottle may thus be inadvertently used when "starred" or chipped, this covering is employed with a view to effectually preventing any glass from coming through in the case of the breakage of a damaged bottle.

**The ball stoppers and bottles** are supplied in two sizes, one for use with the small sized Sparklets and the other for use with the No. 2 size or large Sparklets.

**Bottles with Toggle Corks.**—The bottles are now supplied furnished with this additional attachment, the great advantages of which are fully explained in separate circular accompanying each complete bottle and stopper.



## INSTRUCTIONS FOR THE USE OF SPARKLETS.

The necessity for nearly all of the instructions and points given in the instruction card which accompanies each bottle and in the sheet in each box of Sparklets, will be clear from the explanations already made with regard to the design of the bottles and stoppers.

*Fill the bottle with cold water.*

**The nozzle must always be completely covered by the liquid to be aerated,** as otherwise the gas will escape into the bottle but not into the liquid, with the result that no immediate absorption of the bulk of the gas by the water will take place; while, again, if the stopper is used without the nozzle at end of injection tube, the same want of absorption will occur, the gas rising through the water in large globules. **You cannot aerate hot liquids,** and if this is attempted in a glass bottle the bottle will be broken.

*Insert Sparklet neck downwards, in rubber washer in Sparklet Holder.*

**The Sparklet holder is specially recessed** to receive the top outer edge of the rubber washer, and designed to receive the neck of the Sparklet. **To avoid an escape of gas at the cap after piercing the Sparklet,** it is essential to see that the **washer is in good order and in its right position,** namely, pushed down with its outer edge under the

lip or recess in the Sparklet holder. The washers are supplied turned inside out, and are intended to be so used.

*Shake bottle at once briskly and thoroughly.*

The object of shaking the bottle is to ensure the thorough mechanical mixture of the gas with the water, the result being to break the gas up and entangle it, so to speak, among the molecules of water and to effect an aeration greater than that produced by the first absorption alone. This is effected in aerated water factories by means of mechanical beaters. Really satisfactory aeration cannot be obtained unless the bottle is vigorously shaken, and the shaking is more effective if the bottle is inverted.

If the flycap is screwed on, the Sparklet pierced, the bottle gently shaken once or twice, and the contents immediately poured out, the results, although good, cannot possibly be as satisfactory as if the instructions are followed.

*Aeration more permanent if liquid not poured out at once.*

It is important to leave the liquid in contact with the gas a short time before pouring out, as actual absorption of the gas by the liquid, as distinguished from mechanical mixture, means a more lasting, a more permanent aeration, and the best results are obtained by allowing the bottle after shaking to remain from 10 to 20 minutes at least before pouring out, and by using the liquid as cool as possible. Nothing is gained by leaving the aerated liquid for hours in the bottle, and it is better to use the liquid as fresh as possible.



*To open the bottle, unscrew stopper slowly.*

As to **unscrewing the stopper slowly**, this is simply following the everyday precaution used when uncorking a bottle of soda water. You allow the gas collected in the top of the bottle to escape slowly instead of rushing out and dragging part of the liquid with it.

*If all liquid used, remove cap, extract Sparklet.*

It is always preferable to **remove the empty Sparklet** when the contents of the bottle have been emptied, as otherwise the rubber washer that holds the Sparklet gets blackened and destroyed, and the pin becomes rusted: not that this in the slightest affects the aeration of the liquid or its quality; it simply means **waste of washers and of pins**.

If the cap is unscrewed before the opening of the bottle, the gas, together with the liquid, will force itself up the injection tube and through the pin, and the aeration will be lost.

The stopper must be screwed down again firmly if any liquid left in bottle for later use, to ensure gas not escaping, and the Sparklet not removed.

*To aerate cold milk, wines, etc., fill only to well cover the nozzle.*

The bottles, apart from the necessity of covering the nozzle, should always be filled, with liquid, when water is used. **When viscous liquids**, such as milk, beer, barley water, beef tea,

etc., have to be aerated, it is generally preferable to fill the bottle only to such a height that the liquid **completely covers the nozzle**. The covering of the nozzle and the use of the nozzle are imperative.

*Keep bottle and stopper clean.*

**Keeping the bottle and stopper clean** is, of course, an important point ; this, however, is a requirement not peculiar to Sparklet Bottles, but applicable to any vessel or bottle used for drinking purposes. It is clear, if the bottle and stopper are used for aerating liquids other than water, such as milk, beer, beef tea, &c., that it is essential they should be kept clean. The construction of the stopper makes the cleaning excessively easy, and a little hot water, with or without soda, is all that is required.

*Do not use bottle if starred or cracked.*

**If a bottle inadvertently gets starred or chipped it must not be used**, for the same reason that no ordinary soda-water bottle would hold its contents for a moment if in such a condition.

The bottle will, if intact, withstand many times any pressure that can possibly be applied to it in use, and the cane covering is merely put on to obviate any glass getting out should a starred or broken bottle be accidentally used.

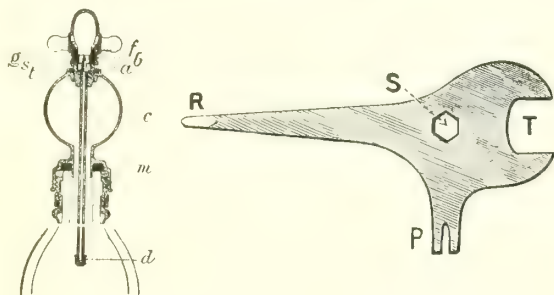
*Unused Sparklets must not be thrown into the fire.*

**You must not throw**, or allow your children or servants to throw, **unused (undischarged) Sparklets into the fire**, any more than you would allow them to so treat full bottles of soda water—the result would be the same in either case.



## TO REPLACE WORN OR DEFECTIVE PARTS.

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### *To replace Sparklet Washer (g).*

This can easily be picked out of the Sparklet holder with the pointed end (*R*) of the tool supplied. A new washer can be pushed into place with the fingers; see that the top outer edge of the washer catches under the slight ledge at (*f*), and that the washer is used turned inside out as supplied.

### *To replace Pin.*

Take out the Sparklet washer (*g*) and insert the end (*P*) of the tool in the slots in pin holder. Unscrew the pin holder and remove the pin by giving it a sharp tap on the point with the flat part of the tool. Put a new pin into the pin holder and then screw latter firmly back into its place with the tool; replace Sparklet washer.

*To replace Washer (m) making Joint on Bottle Neck.*

This is easily removed with point (R) of tool and new one readily put in position with the fingers.

*To remove the Nozzle (d) at end of Injection Tube (c).*

Unscrew same with key (S) provided in tool. When replacing nozzle, screw on firmly but do not use too much force.

## TO CLEAN STOPPER.

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Remove stopper from bottle, apply the wrench (T) provided to the two flats (s) on the Sparklet holder, and unscrew.

Once the Sparklet holder with injection tube attached is withdrawn the ball can be easily and thoroughly cleaned with plain hot water, or water to which a little soda has been added. The rubber washer (g) can be removed as also the pin holder (a) the pin (b) and the nozzle (d), and the injection tube similarly cleaned if necessary.

**The principal thing to keep clean is the ball,** especially if aerating such a liquid as milk ; as a rule there is no necessity to interfere with the injection tube.

If the Sparklet holder has been removed to clean the ball, care must be taken to screw it firmly into the ball again. Before replacing the Sparklet holder see that the washer which makes the joint with the ball at (t) is in its place and in good order.



**When bottle not required for some time**, remove pin and Sparklet washer, clean stopper and put away in dry place.

**If the bottle and stopper have not been in use for some time**, the pin holder and nozzle should be removed to make sure the injection tube and the nozzle are free from obstruction.

In cleaning nozzle be careful **not to enlarge the small hole**, as this will render it useless.

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No force is required in using the bottle or for removing or replacing any of the parts.

One complete set of spares and a special tool are furnished with each bottle, and further supplies of spares can be obtained of all chemists, stores, &c.

### **SYPHON STOPPERS.**

For full particulars regarding these see separate pamphlet.

### **SPARKLETS, THEIR ADVANTAGES.**

The advantages of Sparklets are so many and so obvious to a user that, were all the world users, as they will be, any insistence on the point would be unnecessary.

What do users of aerated waters as at present supplied look for? The majority look for strong effervescence and a large quantity of liquid at a small price,

combined with a minimum of trouble as regards return of empties, &c.; the minority consider, in addition, the quality of the liquid aerated, the quality of the gas that produces the aeration, and the questions of storage room, weight, &c., and, provided they are guaranteed a pure article, are more or less indifferent as to price. We are speaking here of **ordinary aerated waters**, including so-called soda waters.

Aerated mineral and medicinal waters are sold at a price beyond the reach of the majority, but **in the production of these waters** by the use of the tablets specially prepared by eminent manufacturers for Aerators, Limited, **Sparklets undoubtedly offer unrivalled advantages to all who consider purity and excellence** together with economy.

Sparklets satisfy and far more than satisfy all the requirements enumerated, but **the user or his servant conducts the manufacture himself**, and with no more trouble, and in many instances with far less, than is incurred by the uncorking or the unstopping of the ordinary manufactured article. There is no trouble as regards empties, the user buys the special bottle or bottles he requires for daily use, and then only has to buy Sparklets, which he throws away after using. He knows exactly **what he is aerating, what gas he is using, what mineral or other water he is preparing, and is free from any anxiety as regards impurities**, and a stranger to all the worries of corks and wires, deterioration, waste and breakages, weight and storage room.

But the advantages of Sparklets, great as they are even up to this point, **have hardly been touched upon yet.**



With Sparklets **you can not only make aerated waters**, mineral or otherwise, to drink alone, to add to whisky, brandy, etc., to champagne, claret and other cups, or for the other varied purposes for which aerated waters are employed, **but you can also aerate liquids directly without weakening or diluting them with a quantity of water, and without destroying their flavour or nourishing qualities.**

You have got **your aerating medium**--the pure Carbon Dioxide--**in a small compass** ready to apply to any drink, solution or stimulant that may strike your fancy **instead of having it absorbed in a large and cumbersome bottle of water**, water which you do not require.

With Sparklets you can aerate almost anything, and generally with the most beneficial results, medically speaking, apart from the agreeable flavour imparted. It is only possible here to give a few instances of their application ; numerous others will occur to any intelligent reader.

Take the case of children, invalids, &c., and people with weak digestion : **you can aerate fresh, boiled or sterilized milk without dilution**, and make it far more digestible and infinitely more agreeable to the palate than milk to which soda water has been added, an addition which destroys **its nutritive properties** and does not improve its taste. Then there are **insipid invalid drinks**, such as barley water, toast and water, linseed tea, rice water : you can aerate these and make a disagreeable or unpalatable drink if not always a delicious at least a palatable one. **In connection with barley water** Messrs. Keen, Robinson & Co., Ltd., the celebrated manufacturers,

prepare a special barley flour called Robinson's Patent Barley, the barley water made from which is greatly improved as regards palatibility if aerated when cold with a Sparklet. You can aerate **cold beef tea, cold meat extracts**,—a delightful change also to the invalid. You can afford to open a bottle of champagne to give a glass to a sick person without fear of wasting the remainder; the rest you put into one of the large bottles supplied by Aerators, Limited, fitted with a ball or syphon stopper as may be preferred, you then aerate with a Sparklet, and, in the case of the syphon, draw off as required, and the agreeable sparkle and flavour remain to the end. If you cannot afford champagne you can take a light wine, such as Graves or Hock, and treat it in the same manner with, in many cases, better results to the invalid than with champagne. You can treat flat beer as you would flat champagne; you can aerate cold tea, cold coffee, still white wines, fruit syrups—in fact, make any number of delicious drinks **without further diluting them in order to obtain the benefits of aeration.**

Many of the observations already made will apply equally to the hospital and infirmary as to the home, but in such institutions Sparklets are useful in other directions, as, for instance, in times of epidemics when all the drinking water has to be boiled, and rendered consequently unpalatable; Sparklets can then be used to aerate the water and restore its agreeable and thirst-assuaging properties. How invaluable this fact is and has been proved to be to soldiers, travellers and others in malarious regions, prostrated with fever and longing for a refreshing drink, **a drink which may mean life or death**, and in places where ordinary aerated waters in bottles are out of the question!



## MINERAL WATER TABLETS, FRUIT AND OTHER POWDERS.

Tablets specially prepared by an eminent firm of chemists are supplied by Aerators, Limited, for reproducing the various kinds of well-known mineral and medicinal waters.

These tablets are crushed and put into either the ball stopper or syphon bottle, the bottles having been already filled with water. The contents of the bottle are then aerated with a Sparklet as already explained.

Tablets are made containing the same constituents as Soda, Potash, Seltzer, Malvern, Vichy, Carlsbad, Lithia, and other waters, and enable all these to be reproduced at a fraction of their usual cost.

**"Sparkletaris"** Tablets containing the same constituents as the far-famed Appollinaris water can also be obtained, and the advantages of this excellent water are thus placed within the reach of all.

One of the most important and popular developments of Sparklets has been the introduction of the fruit and other powders, such as **"Sparklet Fruit Drinks," "Sparklet Ginger Ale," "Kola Champagne," "Sparklet Tonic Water,"** and **"Sparklene."** The powdered crystals for making these drinks are specially prepared in a readily soluble form for Aerators, Limited, by Alfred Bird & Sons, Devonshire Works, Birmingham, whose name is a guarantee of **Purity** and **Excellence**. They remain unchanged in any climate.

The preparation of the drinks is simplicity itself, all that is required being to empty one or more of the packets of crystals into the ball stopper bottle, according to its size, fill up with water and aerate with a Sparklet as usual, shaking the bottle freely until all the powder is dissolved.

The **FRUIT DRINKS** include Lemon, Orange, Raspberry, Strawberry, and Black Currant: all have the delicate flavour peculiar to the fresh fruit, and **are utterly unlike** the drinks hitherto made with **fruit syrups**.

The price of the fruit and other drinks is another point in their favour. They, as also the tablets, can be obtained wherever Sparklets are sold, or (wholesale only) direct from Aerators, Limited.

We have hitherto only touched lightly **on the advantage of Sparklets from the points of view of purity, convenience, and economy for ordinary everyday use in the home**, there remains now to consider some of the many other points in their favour, as for instance **their very small bulk, and their extreme portability**.

No matter whether one lives in the country far from a railway, or whether one is travelling in England, on the Continent, in India, in the interior of Africa, or in the Klondyke; whether one is shooting, hunting, fishing, yachting, prospecting, campaigning, picnicing, boating or what not, something with a fizz in it is always acceptable, often necessary. This fizz, due solely to Carbon Dioxide as contained in Sparklets, is frequently exceedingly difficult of attainment, owing to the **expense and labour connected with the carriage of aerated waters in bottles** for any



distance, while in many cases it is absolutely unattainable  
**Sparklets remove all these difficulties.**

It is no longer a question of dozens and dozens of bottles of aerated waters: one or more bottles or syphons, and as many Sparklets as you like, and you are absolutely independent; everyone becomes a manufacturer of aerated beverages in bottles or syphons at his own option. Weight and bulk are of great importance under all the circumstances we have referred to, and the question of bulk is perhaps specially important on board ships and yachts.

These features will only be properly appreciated when every one grasps the fact that aerated water consists merely of water containing Carbon Dioxide, with in some cases mineral salts in solution. The thing chiefly desired, the pure Carbon Dioxide, you have stored in the tiny sparklets; the mineral salts you have prepared in tablets soluble in water at once on crushing them, and the results obtained are equal to the best aerated waters, and immeasurably superior to all but the best.

**Thirty-six dozen Sparklets**, the equivalent of more than thirty-six dozen of aerated waters, weigh when packed in case for transport only  $15\frac{1}{4}$  lbs., while **thirty-six dozen soda water** could weigh, packed in cases, **1,008 lbs.—half a ton!**

The pedestrian, the cyclist, the horseman, can all easily carry a bottle and dozens of Sparklets, and can enjoy their whisky and soda, or other aerated drink, cheaply and easily whenever they desire.

To sum up, Sparklets rival under all conditions the best aerated waters, while they have **other and immense unique advantages, inasmuch** as they can be used to aerate liquids without adding further water and are **invaluable in a thousand cases and under a thousand conditions** where aerated water in bottles would be useless or, even if useful, **often unobtainable.**

It is very important to insist upon the point that with Sparklets you **can not only produce the various aerated waters** as used for adding to other liquids, but **you can also aerate liquids directly and without diluting them** with a quantity of additional water.

## AERATORS LIMITED.

Aerators Limited own the patent rights in and manufacture the special bottles, syphons, stoppers and Sparklets, for Great Britain, her colonies, possessions and protectorates, and **no goods except theirs, which always bear their name, can be sold in these countries.** There are three other companies, two established to work these Patents in Europe and the various colonies and possessions of the European countries, and one in the United States. The English company is similarly prohibited from selling its products in these companies' territories.

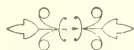
The English Company's goods have received the unqualified approval of the medical profession, and of Her Majesty's War Office, and countless testimonials have been received from users of Sparklets, under all conditions at home and abroad,



eulogising their immense advantages and utility, and welcoming this complete revolution in the old method of aeration, a method which necessitates using the Carbon Dioxide already absorbed in a large volume of often unnecessary water and stored in cumbersome bottles.

A map is appended to the Company's complete illustrated hand-book showing the territory in which **only the English Company's goods can be sold.**

The Company is at all times ready to answer any questions regarding the uses of Sparklets, and to assist customers in any difficulties they may encounter through misreading the instructions, or other causes. Any communication addressed to the Wholesale Manager will always receive the promptest attention.



## PRICE LIST.

|                                                                                                      |                 |     |
|------------------------------------------------------------------------------------------------------|-----------------|-----|
| <b>BOTTLE</b> (small), cane covered, with patent stopper                                             | complete ... .. | 4/6 |
| „ „ covered in cane and felt, with patent stopper, complete, as supplied to Her Majesty's War Office | ... ..          | 7/- |
| „ „ cane covered, with patent stopper and toggle cork, complete                                      | ... ..          | 5/- |
| „ „ cane covered, with toggle cork (without stopper)                                                 | ... ..          | 3/- |
| „ (large), cane covered, with patent stopper                                                         | complete ... .. | 9/6 |
| „ (small), covered with perforated electro-plated metal, with patent stopper                         | complete ... .. | 8/6 |
| <b>TRAVELLING FLASK</b> (electro-plated metal), with patent stopper complete                         | ... ..          | 7/6 |
| <b>SPARKLETS</b> (small), in boxes of one dozen                                                      | ... per box     | 1/- |
| „ (large, No. 2), in boxes of $\frac{1}{2}$ dozen                                                    | „               | 1/- |
| <b>Boxes</b> , containing 12 WASHERS FOR SPARKLET-HOLDER                                             | „               | -/6 |
| „ „ an assortment of SPARE WORKING PARTS FOR SMALL BOTTLES, viz. :—                                  |                 |     |
| 6 Washers for Sparklet-holder, 3 Large Washers (flat), 3 Fibre Washers, 2 Toggle Washers,            | } per box       | 1/6 |
| 6 Pins, 1 Key, 2 Nozzles                                                                             |                 |     |
| <b>Ditto</b> , FOR LARGE BOTTLES (same assortment)                                                   | ... „           | 1/6 |

Separate Bottles or Stoppers, and all the Working Parts (Washers, Pins and Nozzles), also keys for removing and replacing these parts. are supplied.



## PRICE LIST (*continued*).

**TABLETS** for making various kinds of Mineral and other Waters with the aid of "Sparklets" :—

|              |                                                  |     |     |     |            |     |
|--------------|--------------------------------------------------|-----|-----|-----|------------|-----|
| SODA         | (100 in bottle)                                  | ... | ... | ... | per bottle | 1/- |
| POTASH       | (100    "   )                                    | ... | ... | ... | "          | 1/- |
| SPARKLETARIS | <i>(The practical equivalent of Apollinaris)</i> |     |     |     |            |     |
|              | ( 50 in bottle)                                  | ... | ... | ... | per bottle | 1/- |
| SELTZER      | ( 50    "   )                                    | ... | ... | ... | "          | 1/- |
| MALVERN      | ( 50    "   )                                    | ... | ... | ... | "          | 1/- |
| VICHY        | ( 50    "   )                                    | ... | ... | ... | "          | 1/- |
| CARLSBAD     | ( 50    "   )                                    | ... | ... | ... | "          | 1/- |
| LITHIA       | ( 50    "   )                                    | ... | ... | ... | "          | 1/6 |

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**FRUIT** and other **POWDERS** for the production of delicious aerated drinks with the aid of Sparklets :—

|                                  |   |     |     |     |                    |     |
|----------------------------------|---|-----|-----|-----|--------------------|-----|
| LEMON                            | } | ... | ... | ... | per box of 1 dozen | 1/- |
| ORANGE                           |   |     |     |     |                    |     |
| RASPBERRY                        | } | ... | ... | ... | "                  | 1/2 |
| STRAWBERRY                       |   |     |     |     | "                  |     |
| BLACK CURRANT                    |   |     |     |     | "                  |     |
| GINGER ALE                       |   | ... | ... | ... | "                  | 1/2 |
| SPARKLENE (an original beverage) |   |     |     |     | "                  | 1/2 |
| KOLA CHAMPAGNE...                |   | ... | ... |     | "                  | 1/6 |
| TONIC WATER (Quinine)            |   | ... | ... |     | "                  | 2/- |

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*Supplied by all* **Chemists, Stores, &c.,** *and Wholesale only by*  
**AERATORS, LIMITED,**  
**BROAD STREET AVENUE, LONDON, E.C.**





# EIGHT ILLUSTRATIONS

SHOWING SOME OF THE VARIOUS USES AND  
APPLICATIONS OF

*"Sparklets"*







ON THE MOORS.



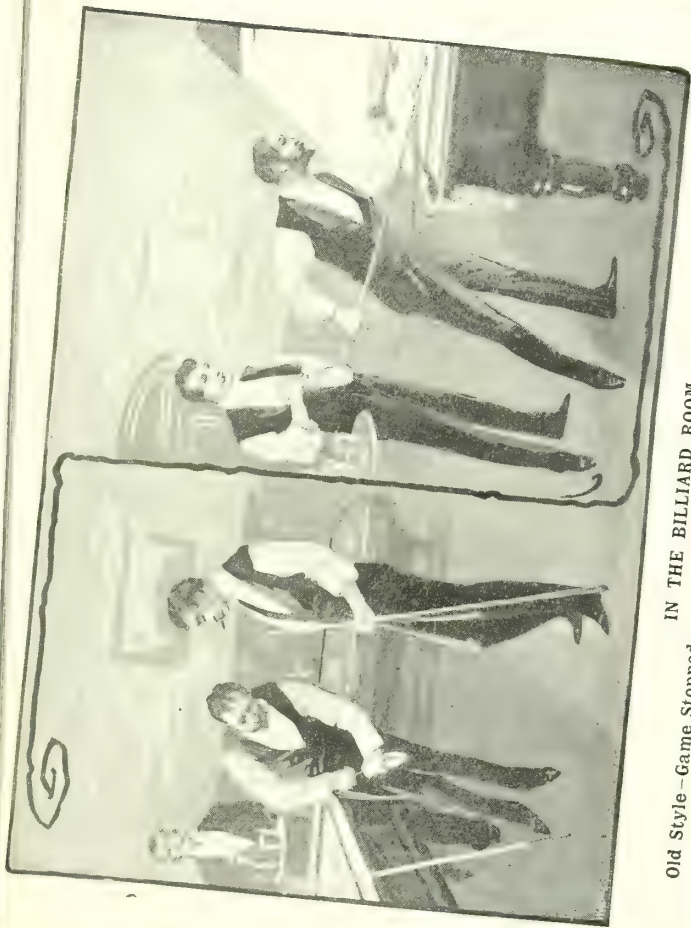




**AT A GARDEN PARTY.**  
**Iced Still Wines made sparkling with "SPARKLETS."**







Old Style—Game Stopped.

IN THE BILLIARD ROOM.

Sparklets—No Trouble, Game Continues.







IN THE NURSERY.  
Aerated Milk, but undiluted.







IN THE HOSPITAL WARD.







TRAVEL AND EXPLORATION.

Train of Camels carrying a few dozens of Aerated Waters. Two Natives carrying Thousands of Sparklets.





*'Sparklets'* AND THE BOER WAR IN SOUTH AFRICA.



A New Dish for the Ostriches: Feeding the Birds with empty "Sparklets."

*From a Sketch by our Special Correspondent, Mr. F. Villiers.*

"Ostriches in the vicinity of the British Camps become very tame and often try to sneak the ventries buttons. War Correspondents find these birds are very fond of empty 'Sparklets.'"—Extract from Mr. F. Villiers's letter.

*"The Spear," 14th February, 1900.*

*Have you yet Stocked*

*“Sparklets”?*

If not, you are losing a source of profit.

Large and growing demand.

**MANY MILLIONS**

NOW IN USE IN THIS

**COUNTRY AND ABROAD.**

**Invaluable in every Home.**

**NO CUTTING.**

**LARGELY ADVERTISED.**



Having once purchased the Bottle, **anyone** can **aerate**  
**what, when, and where** they choose.

Bottles now supplied in Two Sizes, and in various  
styles.

“SPARKLETS” also supplied in Two Sizes.



Box of 1 dozen Sparklets.

For Trade Prices, Show Cards, Illustrated Pamphlets, and other printed matter,  
apply to the patentees and manufacturers,

**Aerators, Ltd., Broad St. Avenue,**  
**LONDON, E.C.**

SEE OTHER SIDE.]



Purveyors by



Special Warrant.

# SPRATT'S PATENT

LIMITED.

Purveyors by



Special Warrant.

## A Visit to the Famous Biscuit Works.



BISCUITS, BISCUITS, EVERYWHERE!

## Additional Buildings

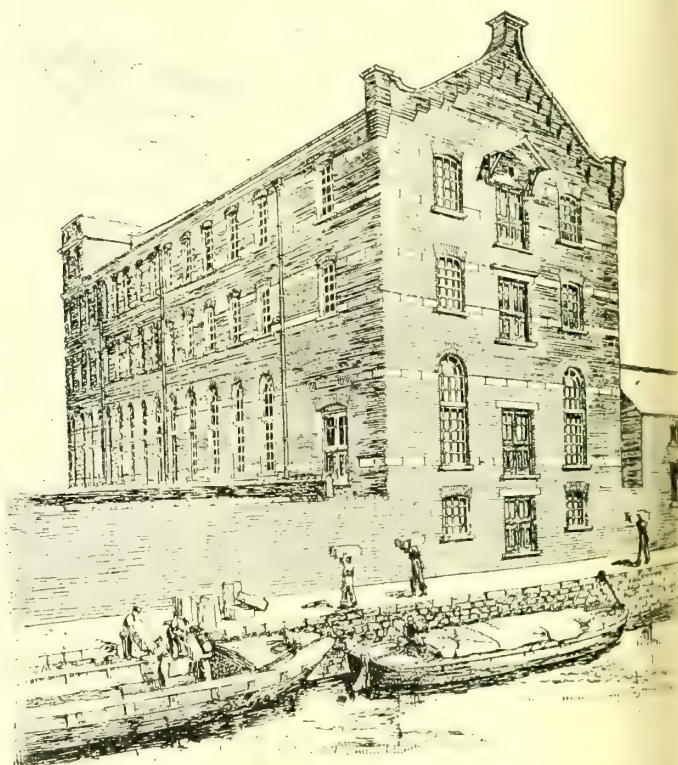
RECENTLY CONSTRUCTED AT

 **POPLAR.**

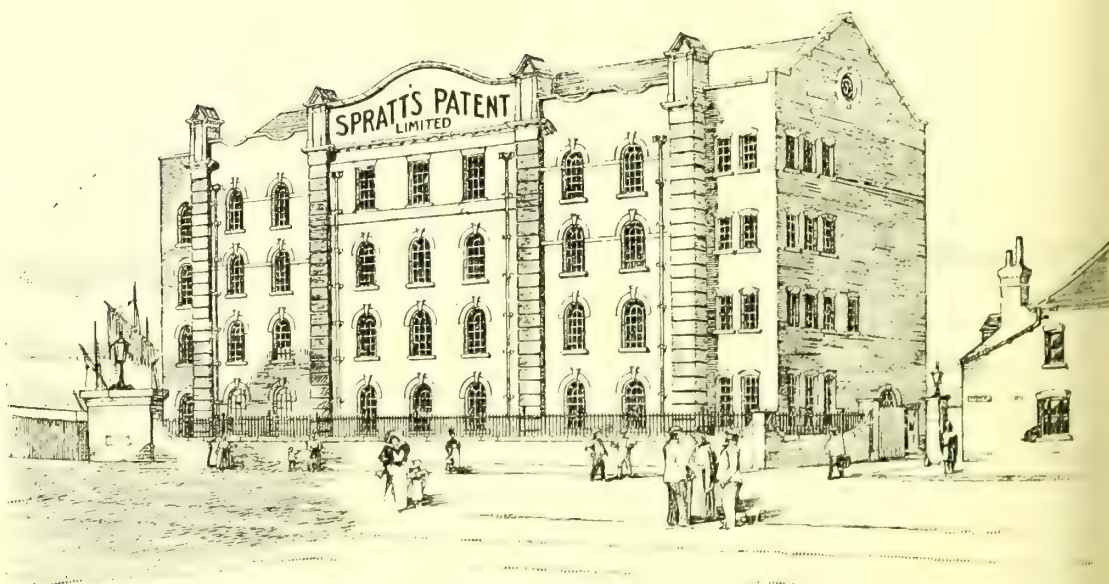
DESIGNED BY

MR. MAX CLARKE,

A.R.I.B.A.



BAKERY NO. 4.



MORRIS ROAD GRANARY AND WAREHOUSE.



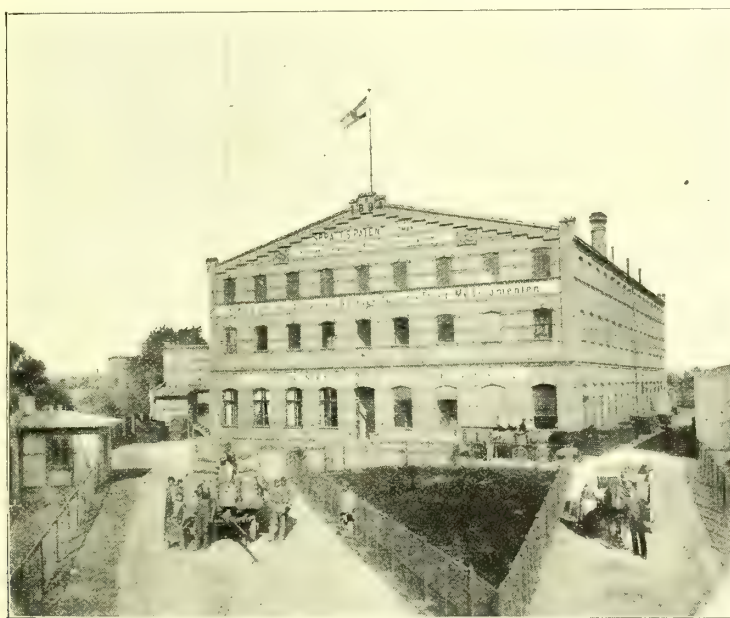
and in 1897 was offered and accepted a seat on the Board of Directors. He early attracted the notice of the then Managing Partner of the firm, and was appointed representative at their stand at the Corn Exchange, Mark Lane. Contact with the keen business men frequenting that Exchange soon fitted him for more important posts, through which he passed in succession until he attained the position he now holds. From the time Mr. Wingrove assumed the management, the sales of the company's products have shown a continuous increase without check. Mr. Wingrove has travelled extensively, having visited the Cape, the Australian colonies, including Tasmania and New Zealand, South America, and, lately, the United States, as well as the principal European cities, in all of which the Company has agents, and, in some cases, factories. Mr. Wingrove is particularly

must see the new offices on your way to our works at Poplar.'

"In the course of the day I had the pleasure of seeing these offices, which are remarkably pleasant and well lighted. They consist of three large, bright, airy rooms on the first floor, devoted to the board room, the General Manager's room, the secretarial department, and a very large room on the ground floor, with basement for show-rooms."

"To return, however, to Bermondsey, where I soon found myself at anchor in the advertising office, surrounded by posters and show-cards.

" 'Before we start,' said my guide, 'you may find it helpful, as well as interesting, to know something of the history of the firm, which has had a most re-



WORKS AT (RUMMELSBURG O) BERLIN.

produced a service of plate and address presented by the staff and workmen on the completion of his twenty-five years in the business.

The full board of Directors consists of Mr. G. Betham Batchelor, chairman; Mr. Robert Baelz, Mr. John Batchelor, Mr. H. P. Jillard, and Mr. Stephen Wingrove, general manager.

'It is rather lucky that you caught me here,' said Mr. Wingrove, as we said 'adieu,' 'for shortly the headquarters will be transferred to 24 and 25, Fenchurch Street, where we shall carry on all the clerical work, and have ample room for our seventy or eighty clerks. The factory will remain here, as of old, but the railway is crowding us, so that we are compelled to move the office staff. You

markable development. It was commenced early in the sixties, in quite a small way, and is now a limited company with a nominal capital of nearly £300,000, but a market value of twice or thrice that amount, and the largest ship biscuit-baking capacity in the world. Some forty years ago the late Mr. James Spratt, who had travelled a great deal and gained much general experience, especially in America, came to the conclusion that there was something radically defective in the methods of feeding dogs in vogue at that time. The unfortunate animals were either condemned to subsist on weevily ship biscuits tempered with dubious animal remains from carcasses boiled down to extract the fat, or were rendered equally unhealthy, if they belonged to the pet dog section of the canine race, by a diet which was both luxurious and

injurious. As a result of this the pet was generally handed over at intervals to the local vet. or farrier, who treated it to the method recommended by Diogenes, that is to say, he put it under a tub with a dry bone and some water for a few days. Spratt's patent biscuits have done away with all that.

"The late Mr. Spratt started in Holborn, almost opposite what is now the office of GROCERY, but after one or two removals he transferred his business to capitalists; Mr. Edward Wylam, the managing partner, being not only a lover of dogs but a practical sportsman and business man. The business, removed to Bermondsey, became a great success, and various departments dealing with all branches of sport were added to it, such as food for game, poultry, rabbits, etc. The artificial rearing of game-birds soon rendered this important, and necessitated the introduction of special machinery. Further extension in this direction followed, and Spratt's now supply food for almost all kinds of furred and feathered animals.

"In 1885, the then proprietors sold their business to a limited company, but quite early in their history they introduced a department for the supply of Dog and Poultry medicines and soap, whilst recently the business of Cage Bird medicines, carried on by Mr. Tibbs, has been added. Of course the whole of this department is under the charge of an experienced, qualified man."

The articles that will, however, specially appeal to chemists, are the various Dog, Poultry, Cage Bird and Game Medicines, also the well-known Dog Soap made by Spratt's Patent, Limited. The various tinned goods such as Toy-Pet, Terrier, Puppy, Cod Liver Oil, and other Dog Biscuits especially suit handling by Chemists, with their limited space. The packet Bird and Parrot Seeds especially appeal to them.

Chemists in the Colonies, where the orthodox lines of Metropolitan Chemists are necessarily not so strictly followed, do a large trade in all Spratt's various Foods, as also do a large number of Provincial Chemists.

"Now that the Head Office is in Fenchurch Street, Chemists will find it easy of access when passing through London, and especially those passing to and from the Docks *via* the Fenchurch Street Terminus.

"Early in their career the manufacture of ship-biscuits engaged the attention of the firm, and we have the largest output of any manufacturers in the United Kingdom in that particular line. We supplied Dr. Nansen's Expedition with a large quantity of ship-biscuits for the crew, and cod liver oil biscuits for the dogs. Here is a biscuit that has endured the trials of an Arctic voyage in the 'Fram,' and come back in just as good a condition as when it started. Similar arrange-

ments were made also for the Jackson-Harmsworth and the recent British Antarctic Expeditions. As an instance of smart work, Spratt's Patent Ltd. were able to turn out 2,000 cases of ship-biscuits for Central Africa recently in two days.

"Besides the Bermondsey factory, I learnt further that the company possess a large new factory at Poplar, a factory in New York for the American Company, also at Berlin and Hanover, and a dépôt at 38, Rue Caumartin, Paris. Moreover the Company has a stand at Mark-lane, and at the Grocery Exchange, Manchester.

"At Bermondsey I saw many wonders in the way of biscuit making and other things, but as I saw them nearly all over again on a more extended scale at the new works at Poplar, where the processes are worked with the very newest machinery and other improvements, it will be more useful to describe the latter works first and come back to Bermondsey afterwards to discuss with Mr. Mason the many other interesting things, besides biscuits, which Spratt's Patent Ltd. manufacture. One thing, however, struck me very much at Bermondsey, namely, the utilisation of the waste heat from the ovens to dry the bird sand. In a general way everything that I shall describe is true of both works, but in the words of the Irish M.P., 'No man can be in two places at the same time, unless he is a bird,' so I will confine my attention to one factory at a time and take wings for Poplar.

"The first thing I noticed on approaching the works was a very pleasant smell of cooking, which grew stronger when I actually entered the immense buildings accompanied by my mentor. Here things were very different to Bermondsey; instead of being 'cabined, cribbed, confined' by a dismal encroaching railway, there was plenty of light and air and I felt that here the Company had room to stretch. The railway and the canal which form the boundaries on two sides of the works are conveniences for the transport of goods, and not prison walls. In addition to the great buildings already standing, fresh mountains of brickwork were rising from the ground, and although the brand newness had not worn off the present buildings, extensions were in busy progress, showing how the goods made by Spratt's Patent Ltd. are appreciated by the public.

"Mr. Franklyn, the superintendent of the Poplar Factory, kindly acted as my guide here, and took me first of all into the boiler house, to show me where the power came from to work the machinery all over the factory. Here were the great boilers, and not far off splendid engines of 150 horse-power, and others of 70, 40 & 25 horse-power respectively, working the shafting right through the building. Close by were powerful pumps, reserved entirely to quell any outbreak of fire. The 'devouring element' would stand a poor chance of getting the





*Yours faithfully*  
*Stephen Wingrove*

**MR. STEPHEN WINGROVE.**

*Director of Soratt's Patent Ltd*



Mr. G. W. Vincent.



Mr. S. T. Lethbridge.



Mr. A. Vaughan.



Mr. J. J. Mason.



Mr. W. M. Dry.



Mr. J. B. Franklyn.



Mr. A. Willcocks.



Mr. W. T. Trehearn.



Mr. W. G. Goss.

HEADS OF DEPARTMENTS.      SPRATT'S PATENT LIMITED.





Mr. F. M. Thomas.



Mr. D. M. Aikman.



Mr. J. S. Record.



Mr. H. C. Walker.



Mr. E. A. Deall.



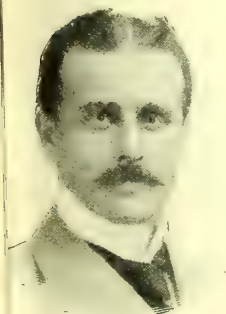
Mr. F. A. Kear.



Mr. Chas. Scott.



Mr. F. J. Green.



Mr. A. A. Pascoe.



Mr. P. H. Grimston.



Mr. A. W. Trevarthen.



Mr. A. S. Willis.



Mr. F. Watt.



Mr. F. J. Bush.

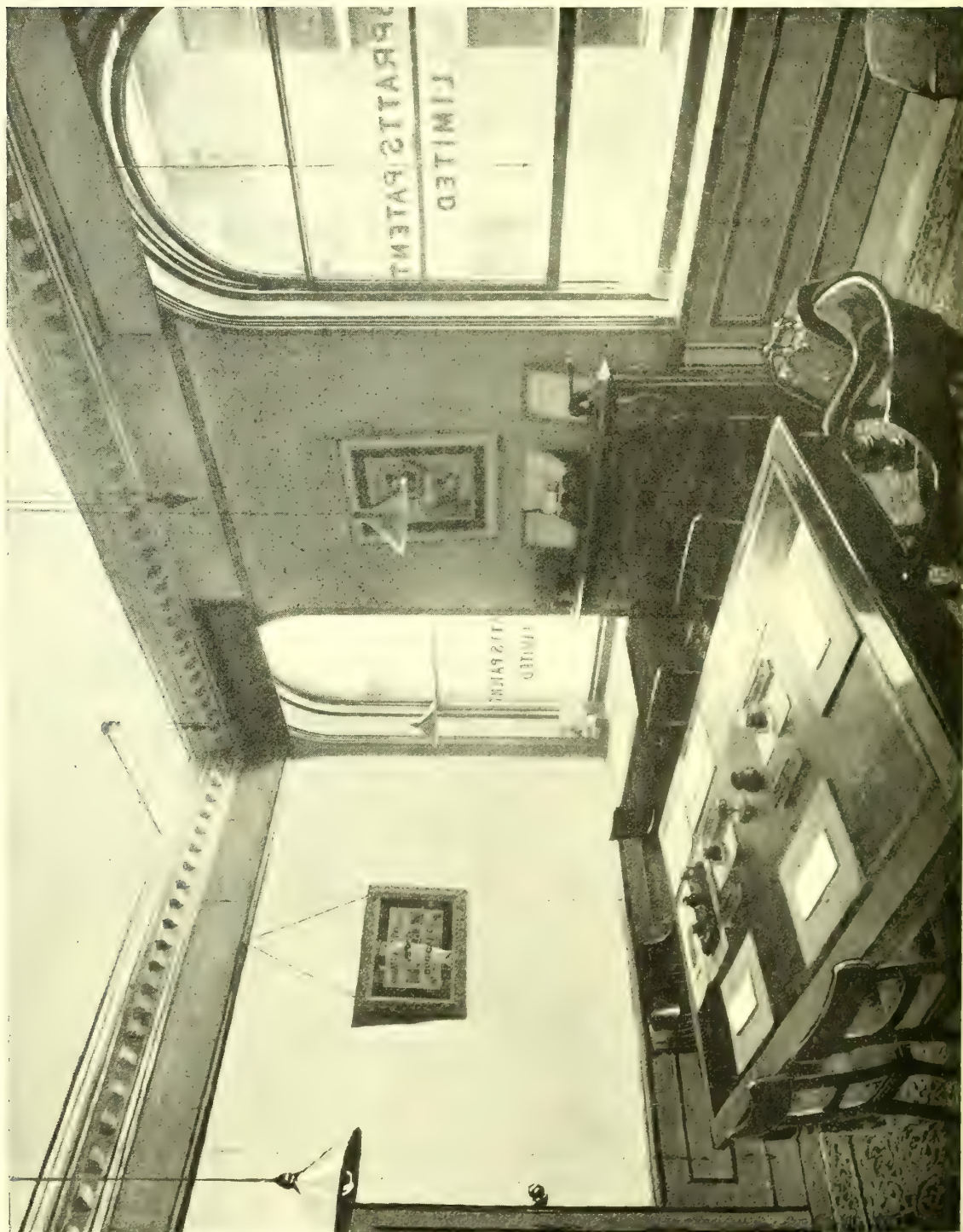


Mr. G. A. T. Salmon.



Mr. H. J. Salmon.

REPRESENTATIVES OF SPRATT'S PATENT LIMITED.



BOARD ROOM.



upper hand in this factory, for all over the building along the ceilings are automatic sprinklers, which, on a fire breaking out, would drench the room of their own accord without any human aid, and at the same time would sound the alarm. These are always tested at regular intervals to make sure they are in working order. However, this is all by the way, what I want to get to is the biscuit making.

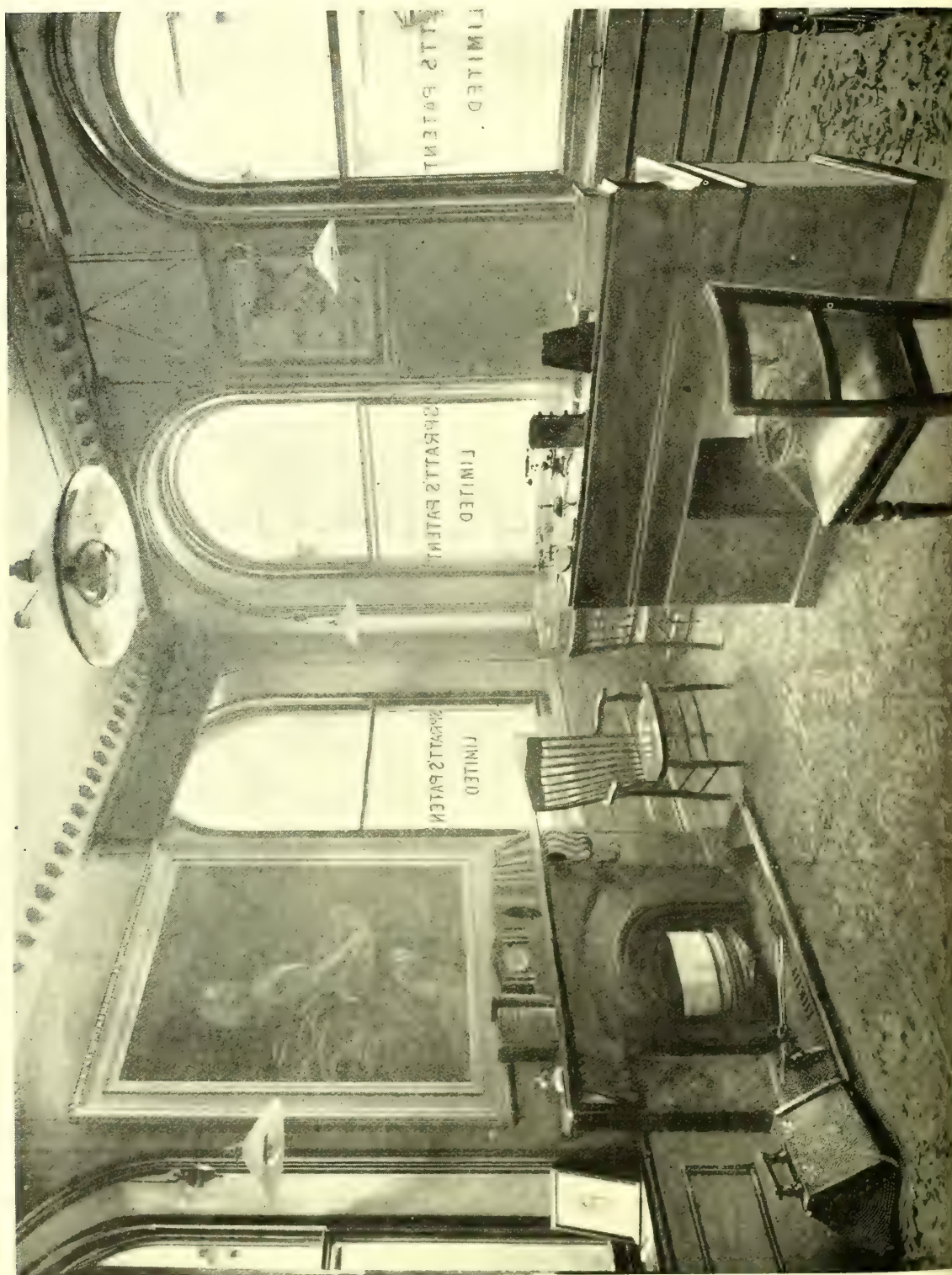
"To begin at the beginning, it was necessary to go up flight after flight of stone stairs to the top of the lofty building, where the flour was stored—flour with a beautiful, rich bloom, as good as any baker would wish to use. There were sacks of flour by the thousand tons, and men were busily engaged shooting sack after sack through a trap door, whilst other men removed the empty sacks. After watching this for some little while, I was taken down to the next floor, where the mixing was going on in two machines, each capable of dealing with nearly a ton at a time. Before passing into this, however, the flour had to go through a centrifugal dressing machine, to remove any accidental impurities. In the mixing machines, which resembled hugh troughs, the various ingredients for the Meat Fibrine Dog Biscuits were thoroughly incorporated, and then delivered on to the next floor, where stood some very strange machines indeed. These I found were kneading machines. The dry material was run into them, the necessary water added, and huge iron arms, capable of kneading half a ton at a time, did the rest. Round and round went the pasty mass, writhing and struggling in horrible contortions, as if in the grasp of some pitiless giant. In a few minutes it was all over; the machinery was reversed, and then, to my consternation, the mass was shot out—the whole half ton of it—as if an earthquake had taken place, and passed on to gigantic rollers which lay in wait for it, and squeezed it out into a more or less flat cake several inches thick. What fun this would have been for the naughty boys in Struwpeter! And would not they have looked nice when they had been squeezed flat between these great rollers as a punishment for their naughtiness? From here the dough passed through other rollers, set down by powerful screws in addition to their own weight, until it was reduced to the necessary thinness. Then it was turned over to make the pin that you always observe in Spratt's biscuits, and passed on a travelling table through an ingenious stamping machine. This machine, like the baker in the nursery rhyme, cuts them and dots them and marks them with 'Spratt's' all in a moment, eighteen cakes being cut and stamped at each movement of the machine. The travelling table carries the cakes on past a row of boys, who pick out the strips in between the cakes and any imperfect ones there may be like a conjuring trick. It is all a question of practice, no doubt, but it was most astonishing to me how deft these boys were at picking out the strips and 'spotting' any imperfections as the cakes moved past them. It is difficult to give an impression of the life and

motion of all this business—even photography failed, for, in addition to the little crowd of boys, some ten men stand beside the table to hasten the progress of the dough and deal with it before it reaches the stamper. All have their eyes upon the moving table, and it seems a matter of life and death almost with them to catch the dough at the right point and not allow anything to hinder the steady stamp of the machine, which impresses its mark on thirty-five to forty tons a day. Forty tons represents over two hundred and fifty thousand biscuits, so that in four days more than a million cakes pass along the table. This capacity is in addition to the Bermondsey output and will be greatly increased when the new buildings are at work.

"The cakes are removed from the table by other boys and taken over to the most wonderful ovens I ever saw. It is quite a long walk from one end of the oven to the other, and the iron floor moves like the table which I have just described, the ends of the endless floor, to use an Irishism, passing over cogged wheels, which keep it moving constantly forward at a regular rate. The pale cakes are placed on the floor where it enters the oven, and come out the other end completely baked. Little iron flaps, suspended from above, close the outlet of the oven, and apparently there is nothing going on, for you hardly notice the floor moving. All of a sudden the plates give a 'click,' and apparently from nowhere, out shoot many dozen ready-cooked biscuits into a conveyer at the bottom, whence they are taken up by an elevator and carried out of sight nearly to the top of the building. I picked up one or two, and weren't they hot! Mr. Franklyn kindly opened the sight holes at the top of the oven, and it was a most curious sight to see the regiments of biscuits in all stages of baking travelling slowly but surely towards me. Inside the ovens the biscuits travel fifty feet, and the ovens are eight feet wide inside, and fourteen feet outside.

"With all this perfection of mechanism Spratt's Patent Ltd. do not forget the care of their workers. In effect, five men do the work of four in the Bakery, so that one man has always a spell off. In a similar way with the boys, each boy has a third of his time in the cool, resting. In various convenient places in the building boiling water is laid on for the men and girls to make their tea; whilst in the brickwork of the great ovens several little ovens are provided in which the men can cook their dinners with the minimum of trouble and no expense. Powerful air propellers are used to keep the air in circulation, so as to make the working conditions as pleasant as possible.

"After seeing the wonders of the ovens I was taken down below into the basement to see the stokers replenishing the fires which keep the ovens hot. Here in the arched basement were pair after pair of bright fires, some with the doors open, receiving a fresh supply of fuel, and others shut.



GENERAL MANAGER'S OFFICE.



One of the most picturesque sights I know of is to see a finely made stoker shovelling coke on to a bright orange-red fire, with the fierce rays throwing its muscular form into strong relief against the dark background. The heat and speed of the ovens are regulated according to the nature of the biscuits, smaller biscuits, such as Puppy Biscuits, requiring less than thick biscuits, such as the 'Meat Fibrine.'

fibrine, which is imported from America in blocks compressed as hard as a slab of concrete. It looked perfectly wholesome and nourishing, and really seemed too good to 'go to the dogs.'

"My mind being now just about as full as it well could be, I went down to the canal side and watched flour being hoisted into and out of barges. The factory has a good frontage to the canal, which of course is invaluable. The hoists here were being

floor being  
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H COMPLIMENTS FROM

SPRATT'S PATENT LIMITED.




A GOOD DEED BY BRAVE DOGS.

Puppy and some of the other biscuits were being put into nice tins; oyster-shells were being ground and graded for different sized birds; machines were at work breaking up flints into grit for poultry; and so on in bewildering variety. Boys were busy weighing out all these things into bags of all sizes. Bone and game meal was being stored ready for delivery; chicken meal was being specially made at ground; bird seeds were being packed; and last, but not least, the Crissel meat, which has such a wonderful effect in bringing hens on to lay during bad weather, was being put up for sale. Here, by the way, I was shown the raw material of the meat

where Hunter's Oatmeal (for which Spratt's Patent Limited are the London sole agents) is stored. The cleaning and mixing processes were all most interesting, but after the vastness of Poplar I was not quite so easily impressed as I should have been at the commencement. Only a small portion of the stock of grain and seed is kept at the factories, the greater portion being stored at the wharves until it is required, being often delivered direct from there. In spite of the enormous output, the machinery and labor-saving appliances throughout the factories have been brought to such a state of perfection that the whole of the work at Bermondsey

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*With Compliments from—*

## SPRATT'S PATENT LIMITED.

24 & 25, FENCHURCH STREET, CITY, E.C.

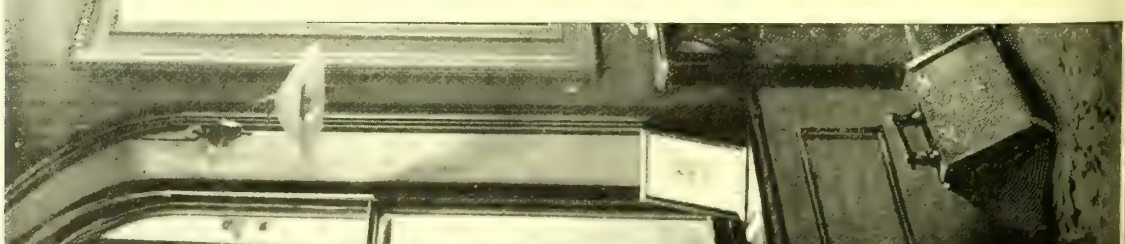


### A GOOD DEED BY BRAVE DOGS.

THE Illustration is a reproduction from the famous Painting by Mr. George M. the possession of Mr. Cumming Macdona, M.P., of his two world-renowned St. Bernard Dogs, "Tell" and "Monarque," the typical representatives of the Rough and Smooth-coated Strains of St. Bernards, both imported many years ago by Mr. Macdona, from Switzerland, when St. Bernards were comparatively unknown in England. Their advent to the Dog Shows of England created a furore in favour of the breed, which was then very little known, but since then these beautiful specimens and their descendants have filled the best and most popular benches of our best Shows, and from these our best and best prize winners are descended. No St. Bernard pedigree being complete without their names appearing in it.

H.M. the Queen and their Royal Highnesses the Prince and Princess of Wales, Leopold and Princess Louise have had from time to time, at Balmoral, Sandringham, and in Canada, many most beautiful specimens of the whole race, direct descendants of "Tell" and "Monarque." In his time, was never beaten, and cleared every Show Bench in the Dog showing in the Western Hemisphere to Hanover in the East of Europe, and in both places, as at Paris, London, and all the provincial Shows in England, Ireland, and Scotland, he always took the lead, by winning first everywhere; like the great race-horse "Tell" it was invariably "Tell" first, the rest nowhere.

Both he and "Monarque," along with many more of their kith and kin, distinguished winners in many a Dog Show, lie buried, resting peacefully on Cyprus Island, in the grounds of a plantation in the beautiful grounds around Mr. Macdona's residence, Hilbre, West Kirby, Cheshire, where a tower, called on the Ordnance Survey "Tell's Tower," stands on the sea-shore of the Estuary of the Dee, the final resting place of the most beautiful and illustrious St. Bernard Dog ever imported into England.





ne of the most picturesque sights I know of is to e a finely made stoker shovelling coke on to a ight orange-red fire, with the fierce rays throwing s muscular form into strong relief against the rk background. The heat and speed of the ens are regulated according to the nature of the biscuits, smaller biscuits, such as Puppy Biscuits, quiring less than thick biscuits, such as the 'Meat brine.'

"From the bottom of the building I went nearly u to the top again and saw the biscuits being opped from the elevators into baskets and re- rived to be shot into huge bins, each of which sed to contain an unthinkable number. As ooked at the bin the whole world seemed to be ide up of nothing but biscuits. The floor of the bs was made of perforated iron plates with steam pes underneath and the biscuits were left here uil they were thoroughly dry and hard. All ound were stacks of sacks ready to go to the rehouse. There must have been from fifty to a hndred tons of biscuits on this floor, at least, nrely being dried.

The process of making the other biscuits sold by the Company is of an almost exactly similar nure to that just described, similar machinery a similar ovens being employed throughout, the dference being in the ingredients, so that there is o need for me to describe it in detail. Suffice it to say that in addition to the Meat Fibrine Dog Biscuits, the Company make Puppy and Toy-Pet an various other Biscuits for canine use, and Wolemeal, Cabin, and First and Second Navy Biscuits for human consumption; in fact, all qualities of Ship and Expedition Biscuits.

My next visit was to the warehouse, which oained the sacks of biscuits brought over from th bakery. Trolleys seemed to be going in all irections, lifts were everywhere, and all around we bags, and bags, and piles of bags of biscuits an other things. It was difficult to realise the enormous quantity of food material around you— th this little pile contained 150 to 200 tons; that th little pile contained so many more hundred tol, and so on.

On the lower floor of the warehouse men and bo were busy packing meal of all kinds; the Pu and some of the other biscuits were being pu into nice tins; oyster-shells were being ground an graded for different sized birds; machines were ha at work breaking up flints into grit for poultry; an so on in bewildering variety. Boys were busy wehing out all these things into bags of all sizes. Be and game meal was being stored ready for delery; chicken meal was being specially made an ground; bird seeds were being packed; and las but not least, the Crissel meat, which has such a v underful effect in bringing hens on to lay during ba weather, was being put up for sale. Here, by the way, I was shown the raw material of the meat

fibrine, which is imported from America in blocks compressed as hard as a slab of concrete. It looked perfectly wholesome and nourishing, and really seemed too good to 'go to the dogs.'

"My mind being now just about as full as it well could be, I went down to the canal side and watched flour being hoisted into and out of barges. The factory has a good frontage to the canal, which of course is invaluable. The hoists here were being worked by a gas engine, almost every floor being provided with a five horse-power engine, which can be used at any time when the main engine is stopped or it is convenient for some temporary reason not to employ the shafting. Everything, in fact, has been thought of at the Poplar factory, including electric light and an artesian well, to render the Company independent of the exactions and caprices of the water company.

"In the yard by the side of the railway I was shown another useful branch of work, which the Company have almost made their own, namely, the provision of benching for dog shows. Not so many years ago dog shows were conducted in a very crude manner. The dogs were tied to stakes in a yard and left exposed to the sun by day and the rain by night, whilst their food was of a miscellaneous and haphazard description, so that it was quite a risk to send a dog to a show at all. The proprietors of Spratt's Patent introduced a proper system of benching, so that each dog practically has a little pen to itself, whilst the use of Spratt's biscuits has revolutionised the feeding arrangements. Spratt's Patent Limited practically take charge now of shows all over the country, as they have at their disposal benching sufficient to fit out several shows at once, or an accommodation for six to ten thousand canines. In addition the Company provides similar accommodation for poultry. This system of benching has made dog and poultry shows a pleasure instead of a trial, and has done much to secure their popularity throughout the country.

"Returning again to Bermondsey I was initiated into the mysteries of the warehouses, where the advertising matter, the dog, cat and bird medicines and many other interesting things are stored and packed. Next I was taken up on to the grain floor, where the grain and seeds are mixed in bulk and where Hunter's Oatmeal (for which Spratt's Patent Limited are the London sole agents) is stored. The cleaning and mixing processes were all most interesting, but after the vastness of Poplar I was not quite so easily impressed as I should have been at the commencement. Only a small portion of the stock of grain and seed is kept at the factories, the greater portion being stored at the wharves until it is required, being often delivered direct from there. In spite of the enormous output, the machinery and labor-saving appliances throughout the factories have been brought to such a state of perfection that the whole of the work at Bermondsey

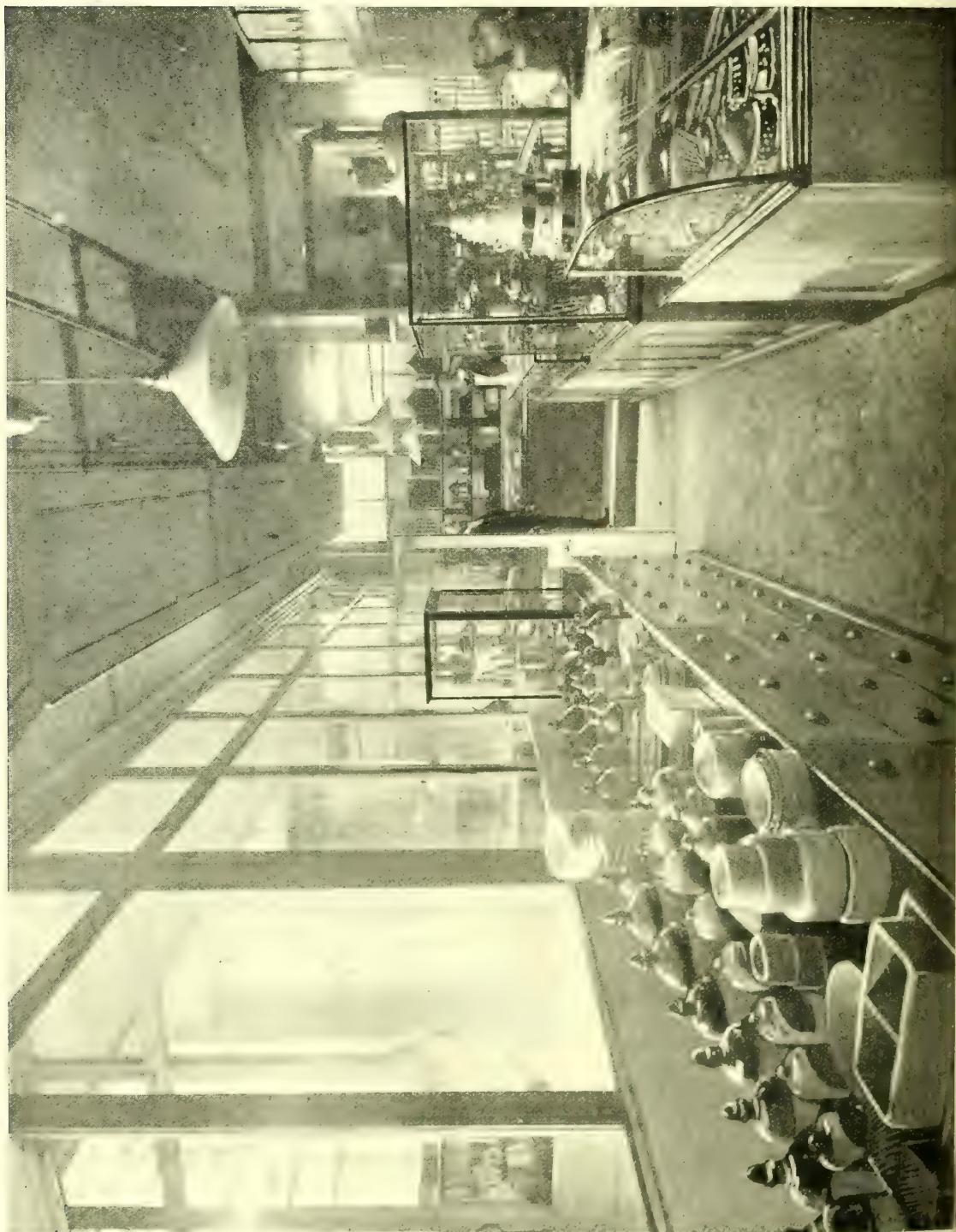


SECRETARY'S OFFICE.





GENERAL OFFICES.



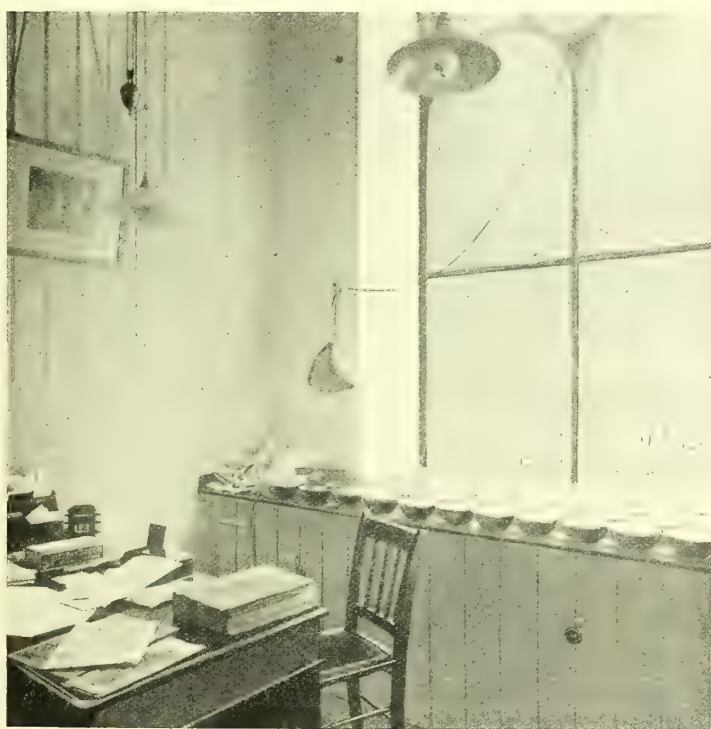


and Poplar is at present carried on by about 600 employés.

"The appliance department interested me very much. Here, in the spacious show-rooms, tastefully displayed under glass cases, were dog collars, chains, leather and silk leads, a great variety of brushes suitable for every breed of dog; combs, both steel and horn; gloves for washing, and horsehair gloves for grooming; every description of whip, from a neat little one suitable for small dogs, to the very heavy one carried by keepers, a variety of terrier and greyhound slips for coursing purposes, and a large and varied selection of dog clothing; a large assortment of wire muzzles and

poultry houses, kennel and poultry railings, muzzles, benching and wire-work for fitting up the numerous dog and poultry shows held all over the country, and I particularly noticed several sections of a range of kennels being built to measure, 36 ft. square, with a corresponding height of 13 ft. The manager of the department explained that the firm issued a large illustrated catalogue of appliances, and were pleased at all times to forward plans, specifications, and estimates for all kinds of live stock, and they undertake the shipment of same to all parts of the world."

On page 16 will be found a photo of the Appliance Sale Room at 24 and 25, Fenchurch Street. The



GRAIN SAMPLE ROOM.

rather muzzles, which are manufactured on the premises, small wicker basket kennels for toy dogs, light wicker baskets for ladies taking their dogs by rail, strong wicker and cane hampers for despatching dogs to and from exhibitions; dog feeding and drinking troughs in great variety, both enamelled, painted, and galvanised iron, stoneware and earthenware; also every description of feeding and drinking troughs for poultry and chickens were also in view, and I noticed further strong machines suitable for breaking large dog biscuits, and bone mills for grinding both green and dry bones.

"In their different workshops were carpenters, painters, smiths, and wire workers, busily engaged in manufacturing all kinds of kennels,

display of dog collars will be interesting to chemists in University towns.

"One of the sights of the district, by the way, is the numerous vans belonging to the Company, many of which are highly decorated with pictures of dogs and birds and loyal emblems of various kinds. I was fortunate enough to see a good many in the yard and had time to admire the beautiful horses attached to them. These vans are well worth seeing, and I regret that the almost blinding sun in which they were photographed has rendered it impossible to give a satisfactory illustration of them.

"No fewer than forty vans are employed in carting Spratt's goods in the Metropolis alone.



ASSISTANT SECRETARY'S OFFICE.

"Before leaving Bermondsey, I was shown many interesting relics. A letter from Nansen, approving of the qualities of the biscuits supplied to men and dogs, another from the leader of the Jackson-Harmsworth Polar expedition, and a photograph of the Esquimaux dogs belonging to the last-named, shown at the Crystal Palace. Photographs and pictures of prize dogs were endless and immensely interesting, although I could not appreciate the points of the animals as an expert would. One of the most amusing of the treasures was a testimonial from the dogs of Mr. G. R. Sims, of 'Opposite the Ducks' Villa.

"Many a reader will be interested in our pages of portraits of representatives of Spratt's, which include numerous faces familiar 'on the road.' Several of these gentlemen have been long in the service of the Company, and all enjoy the confidence and esteem of the Directors and their immediate chief.

"I was also informed that the morning's post averaged 400 daily, besides the many letters coming in during the day, and that on special occasions it was no unusual thing to open from 1,500 to 2,000 letters in the morning.

"Spratt's do not confine themselves to the care

of the healthy dogs, but provide also for the maimed and the sickly. I am not referring to the connection of 'Spratt's' with the Battersea Home for Lost Dogs, where nevertheless Spratt's biscuits are used entirely, but to the Dogs' Sanatorium at Beddington, which is under the management of the canine specialist, Mr. A. J. Sewell, M.R.C.V.S. For convenience this has been made into a separate company, and its full title is 'The Dog Sanatorium Limited.' Here, under the kind supervision of the assistant, Mr. Lawton, I was shown dogs in all stages of health and disease. One department was devoted to surgical cases, which are under the charge of Mr. A. J. Sewell. Another department deals with skin diseases, another with 'quarantine dogs—that is to say, dogs arriving from foreign countries which are sent here to spend their period of quarantine. All the dogs were in suitable wire cages, and were very friendly and glad to welcome a visitor. The animals were of almost every breed known in dog-land, from Dandie Dinmonts to Mount St. Bernards, and most of them boasted aristocratic ownership. Here was a dachshund belonging to Prince Christian, and in a neighboring cage a pug owned by the Duchess of Fife whilst close by was a dog with a broken leg belonging to yet another high-placed owner. Most of the dogs seemed in an advanced stage of convalescence and nearly all were reported to be 'doing well



saw several dogs that had passed through severe surgical operations, necessitated by accidents or malignant growths, and were on the highway to recovery. I must not forget to mention among the celebrities a bull bitch belonging to Miss Louie Pearce.

"In one department a man and a boy were busy brushing and grooming the dogs, and this, I understand, is a matter which is very carefully attended to. I was shown the surgery and operating table; might be expected with such an expert as Mr. Jewell in charge, all the appliances are thoroughly up to date. The distemper cases are the most extensive and the most troublesome, as, being a

upon the chow-chow and her puppies astonished me, and I appreciated the wisdom of the owner in putting Mrs. Chow-chow in such good hands.

"If it had not been for the remarkable cheerfulness and friendliness shown by all the inmates of the Sanatorium, I think I should have felt somewhat depressed, but as it was, even the unfortunate doggies suffering from paralysis and other obvious ailments only caused a momentary pang of sorrow. The general cheerfulness reminded me very much of my own hospital experiences some years ago, when I found that, in spite of their ills, all the patients were astonishingly cheerful. One great Newfoundland interested me particularly, on ac-



GOODS FORWARDING DEPARTMENT.

highly infectious disease, it is necessary to keep the kennels devoted to these sufferers quite away from the rest.

Another important department is the whelping and rearing-in ward, which, amongst others, was occupied at the time of my visit by a valuable chow-chow and a litter of newly born puppies. The mamma was quite friendly, and allowed me to go into the shed and examine her offspring at close quarters. Owners of valuable animals must find this department a great convenience, as the knowledge that they will receive every care and attention and a thoroughly scientific treatment must remove a great anxiety. The value that Mr. Lawton put

count of his extreme anxiety to make my acquaintance and receive more than a passing notice. He was recovering from a broken leg, and his nose was muzzled with a soft bandage to prevent him from interfering with the dressings. The great friendly beast, with its queer nosebag looked most comical. Other dogs in multitudinous bandages reminded me of the humorous dog pictures that appear occasionally in illustrated periodicals. Artists who make this business a speciality would get some good ideas at the Sanatorium. I found everything so interesting, that I went round the principal wards three or four times, patting and talking to the four-footed occupants. Mr. Lawton told me that the friendly disposition which I had noticed



STAMPING BISCUITS BEFORE CONSIGNING TO THE OVENS.



BISCUITS LEAVING THE OVENS BEFORE GOING BY THE ELEVATORS TO DRYING FLOORS.





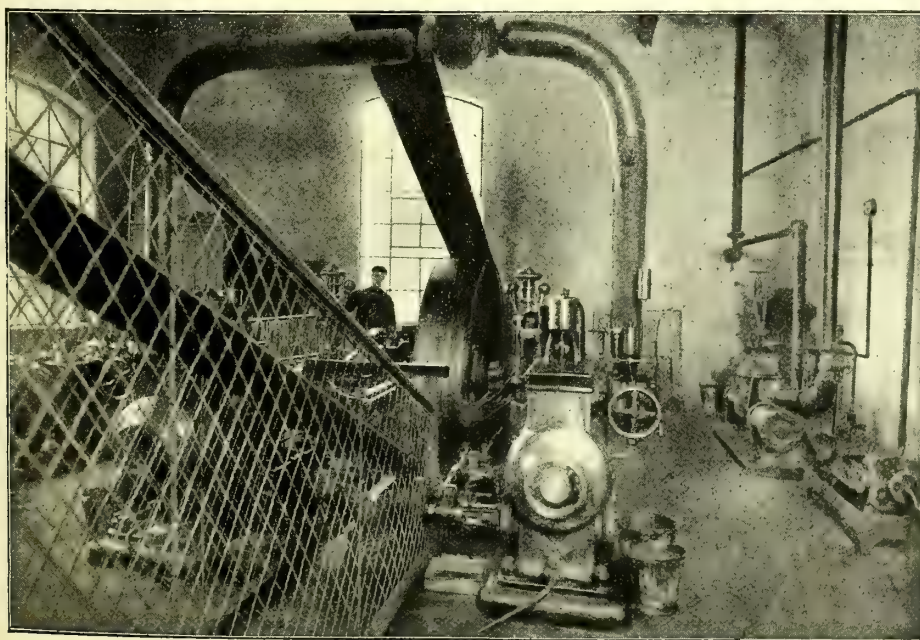
STOKERS IN THE DEPTHS BELOW.

was the rule, and that a savage or mopish dog was quite the exception.

"Each department has a separate yard, and healthy open-air exercise for the dogs is a special feature. At the time of my visit there were 140 dogs in residence, so that the manager and his seven assistants had their hands full. All these dogs are not invalids, as many are sent there as boarders during the absence of the owners from home. Among the boarders I was shown a blind and deaf bloodhound bitch, sent there as a pensioner to remain until she dies. This kindness reminded

me of the Hindoo hospitals for superannuated animals.

"As I pursued my way home in the train, meditating on the wonders of 'Spratts' and the growing kindness shown everywhere to animals, it seemed to me to give promise of still better things in the near future, presenting vistas of continually increasing prosperity for this enterprising Company, which has made so much of its success through the knowledge of and the love for animals possessed by its directors."

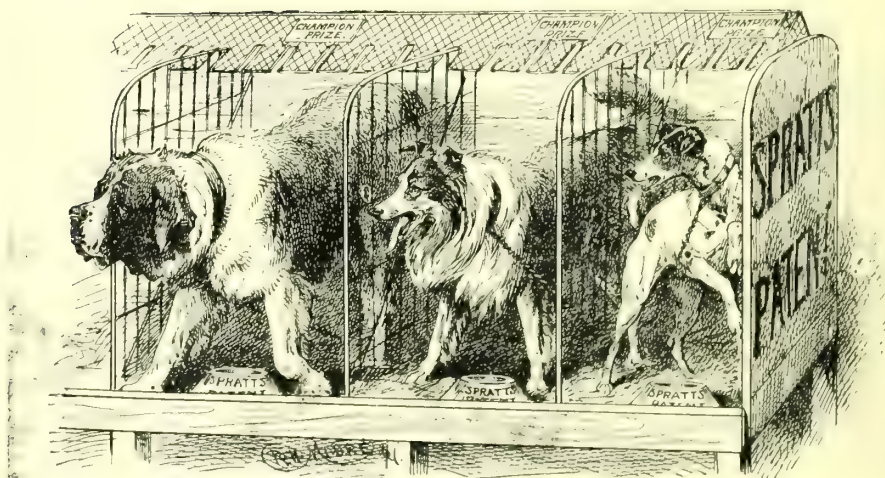


SOME OF THE MACHINERY.—THE MOTIVE POWER TO OTHER MACHINERY.





A BUSY CORNER IN ONE OF THE PACKING FLOORS.



MODERN DOG BENCHING.





# NEW HEAD OFFICES,



24 & 25, FENCHURCH STREET,

LONDON, E.C.



# For the Counter.

A SUPPLY CAN BE OBTAINED ON APPLICATION  
TO THE PROPRIETORS WITH BUSINESS CARD.

## D. & W. GIBBS, L<sup>TD</sup>



THE ORIGINAL  
**COLD CREAM  
SOAP.**

LONDON, E. EST. 1712.

FROM AN OIL PAINTING BY E. ROBERTS

LITH. THOS. FORMAN & SONS, NOTTINGHAM.

"HER FIRST SEASON."

# D & W. GIBBS, L<sup>D</sup> CITY SOAP WORKS, LONDON, E.

# **D. & W. Gibbs, Ltd.,**

## **City Soap Works, LONDON.**

### **SUPERFATTED Cold Cream Soap.**

This soap has proved an unqualified success, and the demand is constantly increasing. Where it has been once tried, repeat orders (often accompanied by unsolicited testimonials) afford the best testimony of the favour with which it has been received by the public. Messrs. D. & W. Gibbs, Lim., are very careful to retain those special qualities which have combined to render this Soap the finest in existence for preserving and beautifying the complexion.

## **COLD CREAM SOAP.**

Otto, Medicated, Toilet.

## **SHAVING SOAPS,**

**COLD CREAM & FLORAL CAMEO**  
Ahead of all others.

## **BALSAMIC CAMEO.**

A novelty in Soap, combining exquisite perfume and a healing balsam.

## **“BABY’S OWN” NURSERY SOAP**

Specially suitable for use on the delicate skins of children.

**REAL GLYCERINE AND CUCUMBER, HONEY & SULPHUR, OATMEAL, CARBOLIC, COAL TAR, OLD BROWN WINDSOR, etc., etc. (See Price List.)**

**Special attention given to the manufacture of customers own specialities.**



AWARDS: LONDON, 1881; VIENNA, 1883; CALCUTTA, 1884; CHICAGO, 1893.

**ESTABLISHED NEARLY A CENTURY.**

"A.B.C." CODE.



(Registered.)



# Baiss Brothers and Stevenson,

BAISS BROTHERS & CO.

AND

H. E. STEVENSON & CO.

**Manufacturing Chemists, Wholesale Druggists,  
Distillers of Essential Oils,  
AND MAKERS OF  
General Pharmaceutical Chemicals.**



**Contractors to Her Majesty's Government—  
THE ADMIRALTY, THE WAR OFFICE,  
THE INDIA OFFICE,  
VARIOUS FOREIGN GOVERNMENTS,  
AND THE PRINCIPAL  
LONDON AND PROVINCIAL HOSPITALS.**



**NEWRY STREET, LONDON, E.C.**

**Drug Mills and Laboratories—**

**87, Cable Street, E., and Blackhorse Yard, E.**

Entered at Stationers' Hall.

Telegraphic Address: "IPECAC, LONDON."

Telephone No. 4369.

AWARDS—LONDON, 1881; VIENNA, 1883; CALCUTTA, 1884; CHICAGO, 1893.

# Baiss Brothers & Stevenson,

JEWRY STREET,

LONDON, E.C.

## SPECIAL QUOTATIONS WILL BE GIVEN FOR THE FOLLOWING—

Carbolic Acid, Cryst. and Liquid.

Phosphoric Acid, Puriss: 1'750

Copaiba Balsam (Importers).

Extracts (solid and liquid).

Sandal Wood Oil (English).

Zinc Oxide Puriss:

Saffron Valencia (Importers).

Ether for Ice Factories.

Beechwood Creasote.

Eucalyptus Oil (Importers).

Chloroform, Pure.

Citrate of Iron and Quinine.

Liquor—Ætheris Nit., 1 to 7

Quinine Salts.

Chaulmoogra Oil (Importers)

Acid Glycerole of Pepsin.

Salicylates, Purest.

Essential Oils (Distillers and Importers).

Morphia Salts.

Cod Liver Oil (non-freezing)

Oil of Almonds (Essential)

Ext: Ipecac: Liq.

Pepsine (Porci, etc.).

Glycerine, purest, 1'260.

*Licensed Compounders of Tinctures, Essences,  
Spirits, Perfumes, &c., in Bond.*



AWARDS—London, 1881; Vienna, 1883; Calcutta, 1884; Chicago, 1893.

# Sandal Wood Oil Capsules.

"OTHNIEL"

BRAND (Regd.)

Guaranteed Pure  
English  
Sandal Wood Oil,  
Gold Bronzed Metal  
Boxes and  
Leatherette Labels.



30 CAPSULES

IN EACH BOX.

Price 15/- per dozen.

N.B.—10 m. in each capsule not 5 m., and gold-bronzed boxes, not cardboard.

NOTE.—Customers' own Names printed free for lots of 6 dozen boxes.

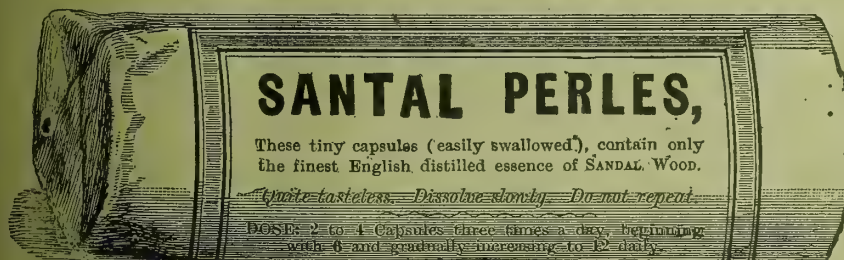
# Gelatine Capsules.

"OTHNIEL" BRAND  
(Registered).

WARRANTED TO CONTAIN GENUINE DRUGS OF THE BEST QUALITY ONLY.

These Capsules have been favourably known in the Market for many years, and for excellence of quality and appearance are unsurpassed, the style and general "get up" is, we think, not approached by any other brand.

Si Minims of  
English  
Sandal Oil in  
each Perle.



36 Perles in  
White  
Flint-Glass  
Bottles.

12 - per dozen Bottles; Or for one gross we print any Name free.

In Bulk 27 - per 1,000

The "PERLES" are wrapped in fancy paper, labelled attractively, and the usual selling price here is about 2/- or 2/6 per bottle, so that the "PERLES" show a good margin of profit.

| AWARDS.          |      |
|------------------|------|
| LONDON . . . .   | 1881 |
| VIENNA . . . .   | 1883 |
| CALCUTTA . . . . | 1884 |
| CHICAGO . . . .  | 1893 |



# "KRYSYL"

(TRADE MARK)

(STEVENSON).

The following extract from a letter lately received will serve to show the estimation in which this new Phenol Disinfectant is held by some of the largest consumers abroad. The letter can be seen at our office by intending purchasers.

"We are duly in receipt of the shipment of  
 "'KRYSYL,' which arrived here in splendid  
 "condition, and which we are pleased to say  
 "has proved entirely to our satisfaction. Your  
 "draft has been duly met, and we shall thank  
 "you to send by first opportunity, etc."

"KRYSYL" possesses many advantages over Carbolic Acid, inasmuch as it is not caustic, and by forming an opalescent milky solution with water, will be found much more economical in use.

**1/6 per Gal. ; 200 Gals., 1/5; 500 Gals., 1/4 per Gal. net**

40-GAL. CASKS FREE. 5-GAL. DRUMS, **3/6** EACH. 10-GAL. DRUMS, **6/-** EACH, F.O.B.

Correspondence invited from the Sole Proprietors,

## Baiss Brothers & Stevenson

### JEWRY STREET, LONDON, E.C.



**RADER :**

# NO, THANK YOU,

I am more than satisfied with the article I am now selling ; it pays me particularly well, and I should not think of changing.

**RAVELLER :** But, my dear sir, my article shows you an extra 5 per cent. profit, and is just as good as the Eiffel Tower.

**RADER :** Yes, that is all very well, but we are always hearing that "Every traveller offers the **BEST** article on the market.

**RAVELLER :** But you overlook, sir, that my article will pay you an extra 5 per cent. profit.

**RADER :** No, I don't ; but it's like this—if I took up yours I should have to talk to every customer for five minutes to get them to take it, and possibly offend them in doing it. People like to have what they ask for, and you never know how much you suffer by pressing people to take what they don't want. The Eiffel Tower pays me a clear 35 per cent. profit on my outlay, and it sells particularly well, and I shouldn't dream of changing. If it were an article on which there was scarcely any profit, I might consider it ; but to change an article that the public insist on having, and that pays me so well, would be simply suicidal.

This conversation is taking place in hundreds of shops all over the country. If you are not selling **EIFFEL TOWER LEMONADE** it will pay you to do so. Terms, 42 per cent. gross, less 5 per cent. discount cash in 7 days. Send at once for a sample gross. It pays 35 per cent. clear profit on the outlay, and has a very large and rapid sale.



A SAMPLE BOTTLE (sufficient to make 2 gallons) sent post free if applied for on a printed Memo. to

G. FOSTER CLARK & CO., 800, "Eiffel Tower" Factory, Maidstone.



# WHY IT PAYS THE CHEMIST TO SHOW IT AND PUSH IT.

1. Because it pays 35 per cent. profit on the outlay.
2. It pays better, because it sells faster than any article of its kind a Chemist handles.
3. It is absolutely unequalled in quality—no one of the many imitations can come anywhere near it.
4. We protect the price and study the Chemist's interest.
5. **THE PUBLIC INSIST UPON HAVING "EIFFEL TOWER."**
6. We give you a "Bottle" of our "Eiffel Tower" and a "Bottle" of our "Eiffel Tower" and help you to sell it.
7. We give you a "Bottle" of our "Eiffel Tower" and a "Bottle" of our "Eiffel Tower" and help you to sell it.
8. The many imitations are cut at all manner of prices, sold at 3d. and 3½d. per bottle, and you are never sure of your profit. With "Eiffel Tower" your profit is assured.

Beware of imitations—they will **REDUCE YOUR PROFIT, REDUCE YOUR TAKINGS, OFFEND YOUR CUSTOMERS, LOWER YOUR STANDARD OF TRADING.**

For further particulars, apply to the "Eiffel Tower" Factory, Maidston, Kent, or to the printed Memo, to

G. FOSTER CLARK & CO. 8, "Eiffel Tower" Factory, MAIDSTON.





PRICE—42/- per gross (3 dozen in a box.)

CARRIAGE PAID on 1 Gross to Railway Station.

DISCOUNT—5% is allowed for Cash in 7 days—this equals

taken in one delivery an extra 2½ discount allowed.

**NOTICE.**—For the convenience of Chemists who have not stocked “Eiffel Tower” Lemonade, and who wish to try a small quantity, we will send (*for a First Order only*) a 3 dozen box, Carriage Paid to any Railway Station, on receipt of 10/6; or 6 dozen Carriage Paid, on receipt of 20/- Net.

# Profit 35 %

|                                                                          |    |   |    |      |
|--------------------------------------------------------------------------|----|---|----|------|
| One is allowed to sell “Eiffel Tower” Lemonade at less than 1½/-         |    |   |    |      |
| per bottle, consequently it is retailed at 4½/-, equalling per gross ... | 54 | 0 |    |      |
| Gross of “Eiffel Tower” Lemonade is sent Carriage Paid for ...           | 42 | 0 |    |      |
| Discount: 5% is allowed for Cash in 7 days—this equals ...               | 2  | 1 | 39 | 11   |
| Thus shewing a profit of                                                 |    |   |    | 14 1 |

or just over 35% on the outlay, and this can be obtained by every Chemist.

# No Cutting

of the price is allowed. We undertake to stop supplying any firm that attempts to do so. You may therefore be sure of your full profit.

Probably a hundred manufacturers are trying to imitate our Lemonade, but no one has been able to produce an article of equal quality. The secret process by which we retain the full fragrant flavour of the Lemon eludes them all. But why should we speak for ourselves? It is well known to every Chemist that the **PEERLESS WILLIAMS & CO. “EIFFEL TOWER” LEMONADE**

“Eiffel Tower” Lemonade is on the P.A.T.A. protected list.

**NEW ACCOUNTS.** Chemists sending in their list will receive the goods at once if they will state on the order that they will not supply the Lemonade at less than 4½/- per bottle. If this is NOT done we shall send on our agreement to be signed, which will, of course, delay the order until the agreement has been signed and returned to us.

[PLEASE TURN OVER.]

# WHAT TRADERS SAY ABOUT



*Write to the Proprietors, Messrs. J. & W. G. B. & Co., Ltd., 10, Abchurch Lane, London, E.C. 4.*

Mr. F. W. BUCKLE, Huddersfield, writes: "Dear Sirs,—I am very pleased with the ready sale of your drinks. CUSTOMERS REFUSING ALL OTHERS. Another year I intend stocking yours only."

Mr. G. J. SOUTHERN, Alton, Hants, writes: "Gentlemen, Please send this order off at once—sold out—and I CANNOT sell any other than yours, they won't have it."

Mr. F. PILCHER, Tisbury, Essex, writes: "I have great pleasure in testifying to the excellent qualities of your 'Eiffel Tower' Lemonade. I can safely say that there is NOTHING of the sort to equal it, and the public are everywhere at the same conclusion."

Mr. W. M. COOMER, Leytonstone, writes: "Dear Sirs,—I enclose cheque. One gross 'Eiffel Tower' Lemonade. Please send at once! am sent out. This article is SIMPLY PERFECT I have experienced such a rush from the public for my proprietary article as for this."

Messrs. BARRIBALL & SON, Loughborough, write: "The sale of your 'Eiffel Tower' has quite exceeded our highest expectations."

Mr. A. SKINNER, 317 Brighthelm Road, S.E., writes: "Dear Sirs,—Enclosed find cheque. Your Lemonade is THE BEST SELLING ARTICLE WE HAVE."

Mr. F. FARBER, Liverpool, writes: "Dear Sirs,—Forward by return a dozen more 'Eiffel Tower' Lemonade. THEY WILL HAVE EIFFEL TOWER of some of our well-advertised drinks."

Mr. G. UNWIN, Dalston, writes: "Gentlemen,—I sold 1/2 gross 'Eiffel Tower' Lemonade three hours, which I personally think is THE FINEST IN THE TRADE."

Mr. D. LOWRIE, Liverpool Street, London, writes: "The sale of Lemonade is grand. We sell 30 dozens last week, and hope to double that during the summer. IT IS A SPLENDID ARTICLE for all Temperance Caterers, and pays well."

Mr. E. LUCKIN, Huddersfield, writes: "Please send me once a day 'Eiffel Tower' Lemonade. ENORMOUS DEMAND. MUST HAVE IT."

Mr. J. HUMPHREY, 379 New Cross Road, S.E., writes: "Please forward at once 1 gross 1/2 d. Lemonade. SELLING FASTER THAN EVER. Am nearly out."

Mr. CHAS. A. PROSSER, Stratford-on-Avon, writes: "The first gross of 'Eiffel Tower' Lemonade sold WONDERFULLY WELL, considering this is only a small place and wherever mine sold have always had repeat orders. I think it a most delicious beverage. Please forward another gross."

Mr. SAUNDERS, Hackney Wick, writes: "Our customers insist upon having 'Eiffel Tower' Lemonade."



# THE PASTEUR (CHAMBERLAND) FILTER.

*This Filter prevents Typhoid Fever, Dysentery, Diarrhœa, Cholera, Malaria, and other water-borne diseases.*

## IMITATIONS.

Imitations of the Pasteur Filter have been shown by repeated Government Investigations to be incapable of affording the protection given by the Pasteur Filter.

## VERIFICATION.

The above statements are made on reports or experiments independently made by persons or bodies in no way connected with the Pasteur Filter, which can be quoted in full if desired. Any statement inconsistent with them, if honestly made, arises from quoting only a part of a report or making an unfounded inference from it.

## Practical Results of the Pasteur Filter.

Pasteur Filters have for some years been applied to 245,000 quarters of the French Army, consisting of those having the worst water supplies in France, Algeria, Tunis, &c.

M. de Freycinet, Minister of War, reports to the President of the Republic (February 24, 1892):—

"Wherever the Pasteur Filter has been applied to water previously bad, typhoid fever has disappeared, even in those districts previously most attacked by it."

General Zurlinden, in a similar report (April 11, 1895), states that the results recorded by M. de Freycinet have become even more marked, and quotes numerous barracks where, through the use of Pasteur Filters, no typhoid fever occurs among the soldiers, even where the civil population are constantly subject to it, and where no case of cholera has occurred, while epidemics have attacked the surrounding population.

## Practical Results of Ordinary Filters.

Mr. Woodall, Financial Secretary to the War Office, stated that the cholera epidemic at Lucknow, 1894, had been shown by a special committee, appointed by the Government of India, to be due solely to the pollution of the water by the barrack room filter.—*Parliamentary Debates*, April 30, 1895.

This epidemic attacked the East Lancashire Regiment (600 strong), causing 140 cases and 90 deaths.

British Medical Journal:—"The standard of efficient filtration."

Lancet:—"A real preventative of water-borne disease."

M. de Freycinet, Minister of War (France):—"Wherever the Pasteur Filter has been applied, typhoid fever has disappeared."

Hospital:—"The only Filter the profession can recommend."

Medical Times:—"It, and no other, affords reliable protection."

Prof. E. Ray Lankester, F.R.S., says:—"Ordinary domestic Filters are worse than useless."

Prof. Sir Henry E. Roscoe, Ph.D., F.R.S., says:—"The only Filter that protects the water-drinker from the germs is the 'Pasteur-Chamberland Filter.'"

Dr. G. Sims Woodhead, M.D., F.R.S.E., Director of the Laboratories of the Royal College of Physicians and Surgeons, reports to the British Medical Association:—"The Pasteur Filter does prevent the communication of water-borne disease. Almost all ordinary Filters materially increase the risk."

## SOLE LICENSEES FOR THE EQUIFEX DISINFECTION APPLIANCES,

ADOPTED AFTER EXHAUSTIVE INVESTIGATION BY THE

Metropolitan Asylums Board (Brook Hospital), H.M. Government (Victoria Hospital, Netley), &c.

Sole Licensees and Makers:

**J. DEFRIES & SONS, Ltd., 147, Houndsditch, London, E.C.**

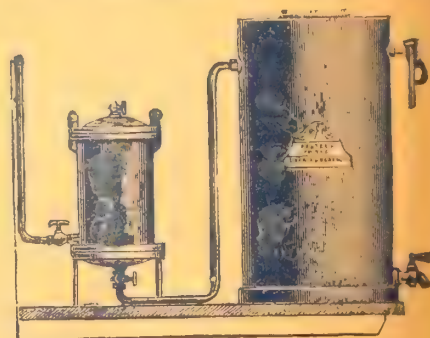
# THE PASTEUR (CHAMBERLAND) FILTER.



**RESTAURANT FILTER.**  
(Nickel Plated.) From 105 = each.



No. 245.  
**DECORATED  
PORCELAIN  
FILTER.**  
(Without Pressure.)  
Output per day, 5 gallons.  
Price, £5 5 -



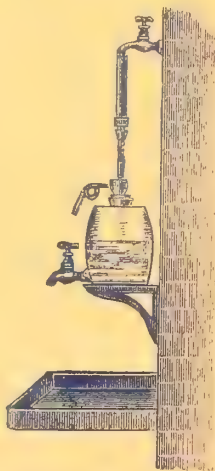
Series No. 233.  
**PRESSURE FILTER.**

| No.     | Approximate<br>Output per day | Price<br>of Filters. |
|---------|-------------------------------|----------------------|
| 233A .. | 25 gallons                    | £3 3 0               |
| 233B .. | 50 ..                         | 5 5 0                |
| 233C .. | 100 ..                        | 7 7 0                |
| 233D .. | 150 ..                        | 9 9 0                |
| 233E .. | 200 ..                        | 14 14 0              |



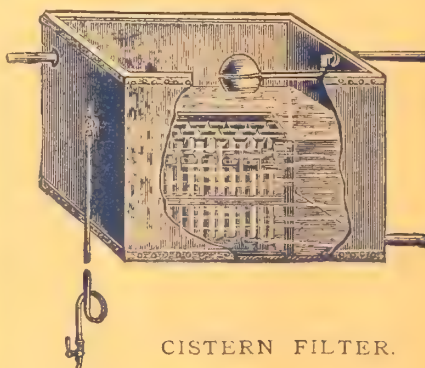
**TAP PRESSURE  
FILTER.**

No. 215 Section. From 21 = each. Approximate output per day, 5 gallons.



**FOR SERVICE  
TAPS.**

Nos. 216 and 216A.  
Same as No. 215, but with Reservoir  
From 31 6 each.



**CISTERN FILTER.**

| No.     | Approximate<br>Output per Day. | Price.  |
|---------|--------------------------------|---------|
| 228A .. | 75 gallons                     | £4 15 0 |
| 228B .. | 110 ..                         | 6 0 0   |
| 228C .. | 150 ..                         | 8 0 0   |
| 228D .. | 225 ..                         | 11 15 0 |
| 228E .. | 400 ..                         | 19 15 0 |

These outputs are calculated on average water at a height of 30 ft., with reasonable allowance for the upper floors.

Prices of intermediate and larger sizes up to any required output will be furnished on application.

Made to work with or without Pressure, and to give any required output. In a variety of other patterns, particulars of which may be had on application.



**TABLE  
FILTER.**

No. 202.  
From 31 6 each.

Output per day, 2 gallons and upwards.

## IMPORTANT TO MINERAL WATER MANUFACTURERS.

The Pasteur Filter deprives water of all germs, and renders it sterile (bacteriologically pure) without altering its natural chemical composition. It prevents growths such as occur in distilled water and syrups, &c., made therewith.

For Industrial Purposes, Town Supplies, &c., these Filters are made to give up to any desired output whatever.

SOLE LICENSEES AND MAKERS:

**J. DEFRIES & SONS, Ltd., 147, Houndsditch, E.C**



# Hunyadi János

"The Prototype of all Bitter Waters."—Lancet (1896).

25 YEARS' SUCCESS IN THE  
UNITED KINGDOM.

"Speedy, sure, and gentle."  
(*Brit. Med. Journal*),  
1884 and 1890.



PREFERRED

TO ANY OTHER BY THE LEADING  
MEDICAL MEN ALL OVER THE WORLD.



PROPRIETOR:

**Andreas Saxlehner, Budapest.**

By Special Appointment to H.M. The Emperor of Austria and King of Hungary.

LONDON AGENCY: TRAFALGAR BUILDINGS, CHARING CROSS, W.C.

# Hunyadi János

A VERY INTERESTING and important contribution on Natural Mineral Waters of the purgative saline type was published in the report of a Special Analytical Commission in THE LANCET of December 5th, 1896. This report is made all the more interesting and reliable from the fact that a LANCET Commissioner personally visited the Saxlehner Springs, near Budapest, and obtained samples on the spot, which were subsequently analysed in THE LANCET Laboratory, and the results obtained compared with samples purchased at a number of shops in London. The results showed that **HUNYADI JÁNOS, the Prototype of all Bitter Waters**, was, wherever it might be obtained, a water showing a **perfect uniformity of composition**, and one that could be **relied upon absolutely** as at **all times being identical** with that drawn from the Spring and fountain head. The numerous analyses in THE LANCET Report give very striking evidence not only of the **honesty of the water**, but bear out also the **remarkable uniformity of composition** that has characterised **HUNYADI JÁNOS** for a **third of a century**. Thus, the results recently obtained in THE LANCET Laboratory accord exactly with those obtained in Liebig's Laboratory over thirty years ago. **Nothing could be more satisfactory than this from the therapeutic point of view.** Practitioners can thus depend upon the water they prescribe, and may be assured that when **HUNYADI JÁNOS** is administered the **medicinal effect will always be the same, and with the same good results.** As is pointed out in the Report, an important feature in **HUNYADI JÁNOS** Water is the constancy of ratio of the active saline constituents to each other. The sodium and magnesium sulphates are together in almost exactly equal proportions, so **that what therapeutic property is lacking in the one is balanced by the other.** Neither the sodium sulphate nor the magnesium salt are in excess of each other. **In this way the purgative effect is not drastic, but mildly yet decidedly effective.** Again, besides these chief medicinal salts there are present in important quantity also in **HUNYADI JÁNOS** Water, Sodium Chloride, Sodium Carbonate, and Lithium Chloride. It cannot be doubted that each of these constituents contributes towards the **favourable action of the water**, which has for so long been a **distinctive and satisfactory feature attending its administration.** Last, but by no means least, the report of THE LANCET Commission shows that **HUNYADI JÁNOS** Water is bottled under **admirable sanitary precautions.** In the details of the analyses given there was not the slightest indication that **HUNYADI JÁNOS** Water contained any objectionable organic matter from whatever source. While therefore the medicinal properties of **HUNYADI JÁNOS** as a natural aperient are **sure and reliable**, it is **safe** also from the very important fact of its **extreme organic purity.**

# Hunyadi János



# Hunyadi János

THE WORLD'S BEST AND SAFEST NATURAL APERIENT WATER.

Over 1,000 Testimonials from Medical Authorities.

25 YEARS' SUCCESS IN THE UNITED KINGDOM.

HIGHEST  
REPUTATION  
ALL OVER  
THE WORLD.



MOST  
USEFUL  
IN THE  
HOUSEHOLD.

SOME EXTRACTS FROM THE BRITISH MEDICAL PRESS.

## THE LANCET:

"Hunyadi János."—"Baron Liebig affirms that its richness in aperient salts surpasses that of all other known waters." (1873.)

## BRITISH MEDICAL JOURNAL:

"Hunyadi János has established itself in favour with leading physicians and therapeutists of every country, whose testimonies bear witness to its action as a speedy, sure, and gentle Aperient for ordinary use; it is remarkably and exceptionally uniform in its composition." (August 30th, 1884)

## THE PRACTITIONER:

"This product of Nature's pharmacy has for many years held a place in the very front rank of natural saline waters."

"We have found that in the treatment of constipation, from whatever cause arising, Hunyadi János fulfils the requirements of an efficient remedy, in that it acts *cito, tuto et jucunde*. The water appears to us to be particularly indicated in cases of gouty and uric-acid diathesis, and in congestive conditions of the liver, abdominal, and other organs. The gentleness of its action makes it especially suitable in the constipation of pregnancy, and in cases of cardiac weakness or vascular disease. In short the peculiar value of Hunyadi János water is that it depletes without depressing." (May, 1896.)

## MEDICAL PRESS AND CIRCULAR:

"Hunyadi János is certainly the best known, and in our experience, the most trustworthy of the Hungarian laxative mineral waters. Taken in the morning, either pure or diluted with hot or cold water, it produces a copious evacuation without leaving behind it any intestinal discomfort or exhaustion." (February 5th, 1896.)

# Hunyadi János

PROPRIETOR:

ANDREAS SAXLEHNER, BUDAPEST.

# Hunyadi János

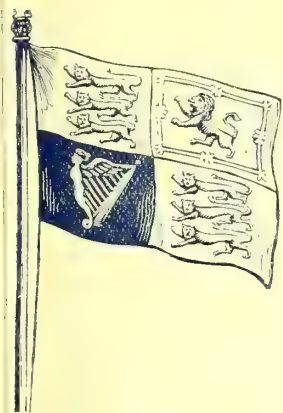
“THE PROTOTYPE OF ALL BITTER WATERS.”—*The Lancet.*



View of ANDREAS SAXLEHNER'S ESTABLISHMENT, near Budapest.

*“Hungary's most important Establishment in Mineral Waters.” (Pester Lloyd.)*





# THE ROYAL STANDARD WINE CO.,

Pharmaceutical & General



E. A. HOLLOWAY,  
*Member of the Pharmaceutical Society*

FOREIGN & BRITISH

## Wine Merchants.

(WHOLESALE ONLY.)

OFFICES & SAMPLING ROOMS:

3, OXFORD MANSIONS, NEW OXFORD ST., LONDON, W.C.

CELLARS & LABORATORY: LONDON DOCKS.

DEAR SIRS,

YOU are probably aware, that I resigned my position as Chairman and Director of Holloway's Wine Co., Ltd., on June 9th last, and have now no further connection with the said Company. But I immediately afterwards assumed the proprietorship of THE ROYAL STANDARD WINE COMPANY, and will be most pleased to hear from or see customers, at the above address, where, I feel confident that satisfactory business relationships will ensue.

For nearly a quarter of a century, my name has been before the Profession, Trade and the Public, in connection with the manufacture of Medicated Wines, in which my experience has been unique.

The whole of the wines bottled by THE ROYAL STANDARD WINE Co., are under my sole supervision, and I have recently, after further experiments, attained a high degree of excellence in the preparation of Coca, Meat and Malt and other Wines, and this forms a guarantee of quality which I trust my numerous friends in the business will not be slow to appreciate.

In handing you herewith The Royal Standard Wine Co.'s Price List, I would specially call attention to the accompanying blocks, which indicate the exceptional style and finish in which the goods are sent out. My practical experience in the Pharmaceutical business has enabled me to gauge the wants of Chemists in the matter of style and quality, and if you favour us with a trial order, we are quite sure that you will be pleased, and become a regular Customer.

- 1.—The prices and terms to purchasers will be found **on comparison to be better** than any other house in the trade.
- 2.—We are prepared to make an allowance to cover the cost of distribution of price lists and printed matter (supplied free) bearing the buyer's name, in the buyer's district. Price List advertisements are also taken.
- 3.—We afford exceptional facilities to those not at present possessing retail licences in **obtaining the same**, and to purchasers of a certain amount of goods during 12 months, are prepared to allow as a special discount the **annual cost** of a License Renewal. See page 4 of this list.

Yours faithfully,

THE ROYAL STANDARD WINE COMPANY.

E. A. HOLLOWAY, M.P.S., *Proprietor.*

FOREIGN CORRESPONDENCE SOLICITED.

[P.T.O.]

# The Royal Standard Wine Compy.'s Price List. TRADE ONLY.

## GUARANTEE OF QUALITY.

ACTS OF PARLIAMENT { 38 & 39 Vict. cap. 63  
And 50 and 51 Vict. cap. 28

Sale of Food and Drugs Act and the Merchandise Marks Act.

The purity and genuineness of every article in this list are guaranteed in accordance with the above Acts.

## Samples Free.

### PORTS.

— — —  
**DIRECT  
SHIPMENTS.**  
— — —

- |                                                                    |      |
|--------------------------------------------------------------------|------|
| 1. Good sound ... .. per doz. bots.,                               | 8 6  |
| 2. Tarragona, full rich Wine ... ..                                | 9 6  |
| 3. Priorata, good colour, high flavour .. ..                       | 12 - |
| 4. Young, stout, Vintage Character .. ..                           | 16/- |
| 5. Royal Standard Invalid Port (well<br>matured, good body) ... .. | 18 9 |
| 6. Superior Old Tawny ... ..                                       | 20 - |
| 7. Very fine Old Port ... ..                                       | 25 - |
| 8. Finest full, old landed ... ..                                  | 32 - |

**IN BULK.**—2 Gallons and upwards, **3/9, 4/6.**

**5/-, 6/6, 7/6, 8/6, 10/-** per Gallon.

*In Casks less.*

**CASES FREE.**



### SHERRY.

Pure and  
Genuine.

— — —  
**SHIPPED DIRECT.**  
— — —

- |                                          |      |
|------------------------------------------|------|
| 1. Good full Wine ... .. per doz. bots., | 9/-  |
| 2. Soft, round and dry ... ..            | 11/6 |
| 3. Medium, pale, full flavour .. ..      | 15/6 |
| 4. Full bodied Dinner Wine .. ..         | 19/6 |
| 5. Oloroso, rich golden ... ..           | 25 6 |
| 6. Fine old nutty Dessert Wine .. ..     | 29 6 |

**IN BULK.**—2 Gallons and upwards, **4/3, 5/3,**

**6/6, 7/3, 9/-, 10/-, 12/-** per Gallon.

*In Casks less.*

**CASES FREE.**



### CLARET.

Guaranteed  
Pure.  
Direct from  
**BORDEAUX**  
as  
Imported.

**CASES CHARGED.**

- |                                                                                                 |      |
|-------------------------------------------------------------------------------------------------|------|
| 1. Stout, full Wine ... .. per doz. bots.,                                                      | 8/-  |
| 2. Medoc, a good sound Wine... ..                                                               | 9 6  |
| 3. St. Julien, pleasant Dinner Wine .. ..                                                       | 10 - |
| 4. St. Emilion, full bodied ... ..                                                              | 10 3 |
| 5. Margaux, a fruity and elegant Wine,, ..                                                      | 13 3 |
| 6. Chateau <b>Duhart Milon</b> ,<br>wholesome and good character .. ..                          | 15/3 |
| 7. Chateau <b>Martineus Margaux</b> ,<br>Old Vintage, soft and full flavour .. ..               | 17 - |
| 8. Chateau <b>Dulamon</b> , soft, splendid<br>Dinner Wine ... ..                                | 19 - |
| 9. Chateau <b>Pichon Longueville</b> ,<br>a fine high-class Claret, with<br>good bouquet ... .. | 21/6 |
| 10. Chateau <b>Beycheville</b> , a full<br>body, round and mellow Wine .. ..                    | 24/3 |
| 11. Chateau <b>Talbot d'Aulx</b> , very<br>soft, and excellent After Dinner<br>Wine ... ..      | 30 6 |

HALF-BOTTLES ARE CHARGED 2/- PER DOZ. EXTRA.

**IN HOGSHEADS** (48 Gals.), **Duty Paid**, from **£8 10s.** to **£19 10s.**

**LICENSES PAID** (SEE PAGE 4).





## BURGUNDY.

Exceptional  
Value  
and Low Price.

Shipped  
direct from  
the BEAUNE  
district.

CASES CHARGED.

"Royal Standard" Burgundy, ferruginous, full bodied and delightful Dinner Wine,  
Bottles ... **13/-** per doz. Half-bottles ... **8/6** per doz.

Madeiras, Marsalas, Italian & Australian Wines supplied at Market prices of the day. *Enquiries solicited.*

## SAUTERNE.

1. **Graves**, a light, dry, elegant Wine much appreciated  
for the Summer ... .. *per doz. bots.*, **13/6**
2. **Barsac**, Superior Wine, with a good Character ... .. **16/6**
3. **Haut Sauterne**, very choice ... .. **26/6**

## DOCK.

1. **Oppenheimer**, pure natural Wine ... .. **13/6**
2. **Neirsteiner**, high-class Vintage ... .. **15/6**

## CHABLIS.

1. **Ordinaire**, a pleasant and dry Wine ... .. **13/6**
2. **Meursault**, a richer Wine, splendid value ... .. **20/-**

## CHAMPAGNE.

(Romanee freres.)

CASES FREE.

Shipped direct from Epernay by The Royal  
Standard Wine Company; the price and  
quality cannot be beaten.

**Champigny Mousseux**, (Saumur) *per doz. bots.*, **26/6**

**Romanee freres, (R.S.W.C.)** an old  
and thoroughly matured Wine, old  
landed ... .. **48/6**  
Half bottles (24 in a case) ... .. **52/6**

**Coca Champagne**, of great value for nervous  
exhaustion and mental fatigue.

Half bottles of this Wine, only supplied *per doz.*, **30/-**  
*Cases free.*

All Sparkling Wines should be stored lying on  
their side.

Sample Bottles of ALL Wines, same rate as per dozen,  
postage extra.

## COCA

## CHAMPAGNE.

## COCA WINE.

(R.S.W.C.)

"Royal Standard" Burgundy type, (a light  
nourishing invigorator), plain labels corks and  
capsules, outer wrapper labelled, nothing better  
made, far superior and shows better results in manu-  
facture than the Wines usually prepared with heavy  
Tarragonas and cheap Ports, and more easily digested  
and assimilated—

*Per doz. bots.*, **17/6**. Half bottles, *per doz.*, **9/-**.  
*Cases charged at cost, returnable.*

**IN BULK.**—2 Gallons and upwards, as above  
or prepared with heavier Wines, at low prices.



# The Royal Standard Wine Compy.'s Price List. TRADE ONLY

## LIEBIG'S BEEF & MALT WINE. "Royal Standard." Burgundy type.

The same remarks apply to this Wine as the Coca Wine, a very handsome get up, once tried your customers will have no other, a delicious beverage and nutritious Tonic, strengthening and flesh forming—

Per doz. bots., **17.6.** Half bottles, per doz., **9/-.**

**IN BULK**,—2 Gallons and upwards, or prepared with heavier Wines if required, at low prices.

Cases charged at cost, returnable.



## BRITISH WINES.

(Sweets License required.)

In splendid condition, well matured, good bouquet.

|                          |          |             |                            |
|--------------------------|----------|-------------|----------------------------|
| Ginger,                  | Cowslip, | Port,       | Blackcurrant,              |
| Orange,                  | Damson,  | Sherry,     | Greengage,                 |
| Raisin,                  | Rhubarb, | Gooseberry, | Raspberry, &c.             |
| In 3 doz. Assorted Cases |          | ... ..      | per doz. bots., <b>7.6</b> |

Special Reduction on large quantities. Cases and bottles FREE.

**ALSO IN BULK.**

## QUININE WINE. British Pharmacopœia—best Hydrochloride guaranteed.

(No License required.)

3 dozen lots, Cases and Bottles FREE ... **7.9** per doz.  
Plain labels, corks and capsules. (Own name on 3 dozen) ...  
than this quantity, also in bulk ... ... **8/-** per doz.

**COKALANIS** (sparkling). Royal Standard Wine Company. A delicious refreshing Table Tonic. May be drunk plain, and especially adapted for blending with Wines, Spices, Lemon Squash, &c.  
(Coca & Kola.)  
In Splits (Apollinaris bottles) ... .. **3/-** per doz. Reputed Pints, **4/6** per doz.  
Cases and Bottles free. Carriage Paid anywhere United Kingdom.

**LIME JUICE CORDIAL.**—"ROYAL STANDARD." Delicious flavour, great strength and absolutely pure. Prepared directly from the freshly expressed Juice of selected ripe fruit ... .. **7/6** per doz. l.  
Plain labels, corks and capsules. Cases and Bottles FREE.

**LEMON SQUASH.**—"ROYAL STANDARD." Retaining the rich fragrant flavour and properties of fresh Messina Lemons from which it is carefully prepared. Plain labels, corks and capsules. Cases and Bottles FREE, also in bulk ... .. **7/6** per doz.

### SAMPLES AND PRICES OF ALL GOODS PER RETURN OF POST.

**NOTICE.**—All communications to be addressed to THE ROYAL STANDARD WINE COMPANY, 3, Oxford Market, NEW Oxford St., LONDON, W.C.

References are required on opening new accounts or unless already known to the proprietor (Mr. Holloway).

**PRICES** quoted in this list are for Cash, one month; 2½% 7 days. Otherwise absolutely net.

**Bottles are not charged** for in any instance and with most orders cases will be free. Carriage F. O. R. London, where indicated.

Orders are despatched the same day as received up to any amount of goods.

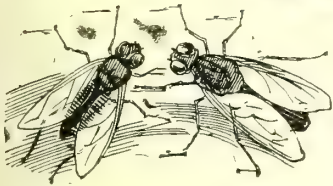
**LICENSES.**—Our proprietor has had large practical experience in obtaining licenses for Chemists, and will undertake obtaining of a License for any Chemist on the most favourable terms. Give us your business and let us hear from you in good time for the next sessions. It means a sound agency, little expense, and a great addition to business.

**WE PAY YOUR LICENSE** on a £16 order net. Say as follows: (proforma invoice on request) 6 doz. large R. S. Coca, small, 3 doz. each size R. S. Liebig's Beef and Malt; 1 doz. each R. S. Burgundy large and small; 2 doz. R. S. Port; 1 doz. Coca Champagne. Or half license is paid on £10 orders.

**LICENSES PAID** (READ ABOVE).



# ALL GONE.



Two lonely flies in a corner met,  
And talked 'mid the sultry weather;  
Said the first surprised, "Are you still here yet?  
I thought all had gone together;  
My friends and comrades all lie dead  
(Excuse the tears I'm shedding)—  
They each lie low in their last long bed  
In the 'Cemet'ries' of Reading."

Said his wise old friend, "I have known, I have heard,  
I have seen some funny capers,  
And I've grown quite fat ('pon my innocent world)  
On poisonous fly=papers.  
But of all the deadly, stick=tight things  
To bring things to a heading,  
There is naught can clip our fragile wings  
Like the 'Cemet'ries' of Reading."

Then they plucked up heart and flew away;  
And they stole and irritated,  
And vexed the soul of the housemaid gay,  
Nor thought of a doomsday fated,  
Till they stood on a soft sweet "Cemet'ree,"  
And then grew dumb and dumber.  
And the owl crooned a dirge in the old oak tree  
For the last two Flies of Summer.

---

## TUNBRIDGE & WRIGHT, READING.

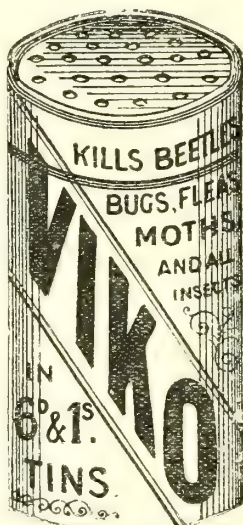
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# THE INSECT KILLER

*that can be relied on*

TO EXTERMINATE  
TO SELL  
TO INCREASE PROFITS

A UNIQUE COMPOSITION WITH  
MOST MARVELLOUS EFFECT  
UPON INSECT LIFE.



THE TRADE WOULD DO WELL  
TO ORDER AT ONCE.

"VIKO" for Cockroaches.  
"VIKO" for Moths.  
"VIKO" for Fleas.  
"VIKO" for Bugs.  
"VIKO" for Mosquitoes.  
"VIKO" for Ants.  
"VIKO" for every species  
of Insect.

... VIKO ...

As a Preventive against Moth is Unrivalled. "It really has no equal." If sprinkled amongst Furs and Clothes it instantly destroys any existing insect life, and ensures perfect freedom from a return of the pest.

PERFECTLY HARMLESS TO ANIMALS.

TUNBRIDGE & WRIGHT, Manufacturers, READING, ENGLAND.

## DR. MACKENZIE'S

Catarrh Cure

# SMELLING BOTTLE.

Dealers in Patent Medicines should always Stock

## "MACKENZIE'S CURE."

It is well got up, sells at sight, bears a large profit, and wherever introduced has a rapid sale, giving satisfaction to both buyer and seller.

Sent out in Fancy Cardboard Boxes containing half a dozen bottles.

## PRICE ONE SHILLING.

May be obtained from all Wholesale Patent Medicine Warehouses.

SHOWCARDS AND HANDBILLS FROM

MACKENZIE'S CURE DEPOT, READING, ENGLAND.





TO PREVENT DISAPPOINTMENT ORDER EARLY.

# THE "FLY CEMETERY"

TITLE AND TRADE MARK REGISTERED.

## NON-POISONOUS!

The Original and by far the BEST Sticky Fly Paper in the market.

## ANNUAL SALE MILLIONS.

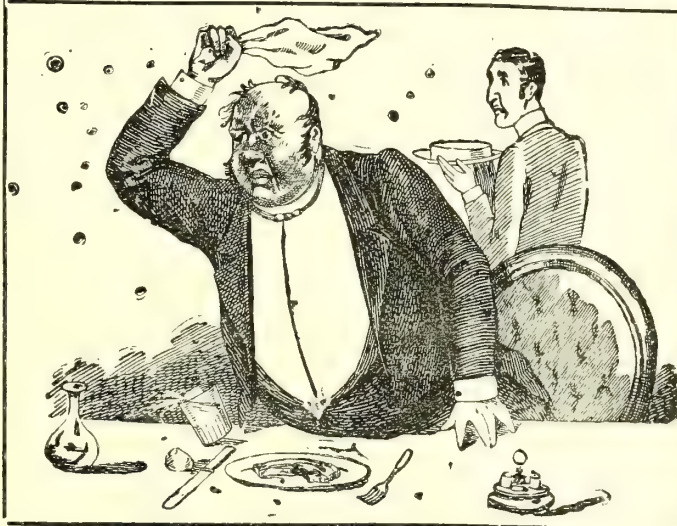


### END OF SEASON.

This Gentleman  
would NOT stock  
the  
"Fly Cemetery."

RESULT:  
**DISAPPOINTMENT.**

Catches more  
Flies in a day  
than the  
old-fashioned  
Papers do in a  
week.



PRICE  
**ONE PENNY.**

Well known in  
every  
Household in  
the  
Kingdom.

e ars Large  
Profits.

The immense popularity of the "FLY CEMETERY" with the public has had the usual result attending the introduction and prosperity of all genuine articles in raising up a host of *imitations*, which for the most part disappoint the purchaser. We therefore warn our friends not to be misled by specious announcements, but when they order Sticky Fly Papers to insist upon having the  
**"FLY CEMETERY."**

SOLD BY ALL THE LEADING WHOLESALE HOUSES.  
LIBERAL TERMS.

### IMPORTANT NOTICE.

In order that our Customers may not suffer any loss through deterioration of Stock kept during the Winter, we are willing to Exchange any thus left over for Fresh Stock at the commencement of a new Season. We only ask our friends to assist us by ordering judiciously, especially towards the latter part of the Season.



### END OF SEASON.

This Gentleman DID stock the "Fly Cemetery."  
RESULT: **GOOD BUSINESS.**

SAMPLES AND TESTIMONIALS FROM

## TUNBRIDGE & WRIGHT, MANUFACTURERS, READING.

North of England Depot: 4 GALLOWGATE, NEWCASTLE-ON-TYNE. Telegrams: "FLIES READING."



# "COBWEBS."

UNSOLICITED—ONE AMONGST MANY.

.....

Messrs. ASPINALL & CO., Chemists, Ashton-in-Makerfield,  
Lancashire, write as under:—

July 9, 1900.

Dear Sir,—Please send per return 2 gross "Cobweb" Fly Papers. Postal Order value 10s. enclosed.

Your "**COBWEB**" Fly Papers are, we consider, the best and stickiest on the market. At the end of last season we had about one dozen left, and they were put away out of the road, and at the first inquiry for Sticky Papers at the beginning of this summer we looked them up, never expecting them to be really saleable, but we are pleased to say we were agreeably surprised to find them as sticky and good as ever.

Yours truly,

(Signed) ASPINALL & CO.

~~~~~

English Made ~~~

Hermetically Sealed

Sticky Fly Papers.

CHRISTY STRONG, READING.



# **"COBWEBS."**

.....

In reply to inquiry if there was any objection to my making use of Messrs. ASPINALL & CO.'S Testimony, as on opposite page, they reply as follows:—

Every word we have said in favour of "Cobwebs" is certainly quite true. Our customers will have no other kind. Since we commenced selling "Cobwebs" our sales have annually increased, and are yet steadily doing so this year. **"COBWEBS"** are undoubtedly the BEST STICKY FLY PAPER we have ever had to deal with.

---

**"COBWEBS" 5s. per gross, Carriage Paid.**

*Cash must accompany order.*

---

**SAMPLES FREE.**

**STOCKED BY THE LEADING WHOLESALE HOUSES.**

---

**MILLIONS ~~~**

**Sold Annually.**

---

**CHRISTY STRONG, READING.**

**NOTE.**

OUR Bullet  
**FLY CATCHER,**  
 like all *Successful*  
 inventions, provokes the  
 snarl of  
**JEALOUS RIVALS.**

**DO NOT BE  
 INTIMIDATED.**

Send for Sample, your  
 Orders will follow.



**THE BULLET**  
 (PROTECTED)  
**FLY**  
**CATCHER**  
 HERMETICALLY SEALED.  
**Never Dries Up.**

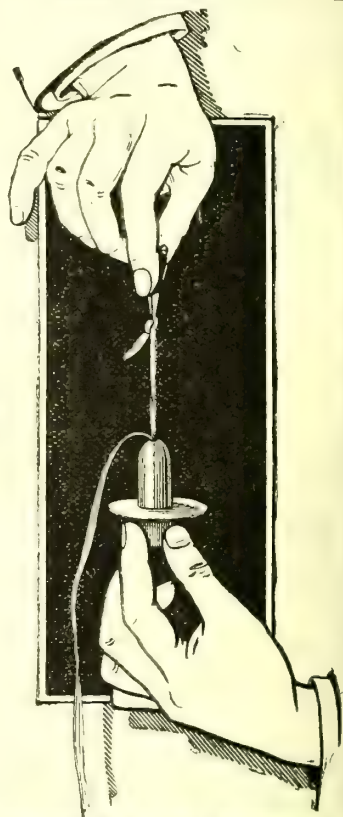
1<sup>D.</sup>  
 EACH.

1<sup>D.</sup>  
 EACH.

Packed in  $\frac{1}{2}$ -gross boxes, with Showcards, &c.

PER 6/6 CARRIAGE  
 GROSS. PAID.

NO INFRINGEMENT ON ANY EXISTING PATENT  
 (but an acknowledged improvement).



**GODDON, LTD., 31 Caffyn Street, Blackfriars, LONDON, S.E.**



**OF HONOUR**  
 GOES TO THE  
**'Butterfly' Gum**  
**PAPERS.**

Have you tried these?  
 Have you noted the Price?

Carriage Paid, 1 gross 4/6; 5 gross 21/-,  
 ON RECEIPT OF P.O.

SEND FOR FREE SAMPLES TO  
**THE WESTERN PHARMACIES CO., YEovil.**

AGENTS—

**MAW, SON & THOMPSON, Aldersgate St., LONDON.**

Telegrams—"KAY STOCKPORT."

**KAY'S "CHESHIRE" BIRDLIME**

FOR CATCHING



**BIRDS,  
 RATS,  
 MICE,  
 BEETLES,  
 FLIES, &c.**

In Sealed  
 Decorated Tins  
 (as illustrated),  
 or

In BULK 1, 2, 3, or 7 lb. Tins or Casks.

THE  
**"VAMPIRE"**

**SPIRAL FLYCATCHER**

(GREATLY IMPROVED THIS SEASON).

The Best Flycatcher in the Market.

**SEND FOR SAMPLES.**

**ALL FLYPAPER MATERIALS.**

**Soluble Sanitary Fluid**  
**DISINFECTANT POWDER, &c.**

**KAY BROTHERS LIMITED, Stockport.**





**DO NOT** SEND CUSTOMERS AWAY  
BUT SEND 5/- TO J. SMITH  
FOR A SAMPLE GROSS.

**FATAL**  
**FLYODOOMO**

**INOFFENSIVE**  
**CLEANLY**

**NEATLY**  
**ROLLED**  
**AND**  
**BANDED**

**BEST OF FLY PAPERS**

They Sell  
at  
1d. each.  
Customers  
come back  
for them,  
but the Flies  
stay on.

.....  
Liked by all  
Householders.  
.....

**STOCKED BY ALL WHOLESALE HOUSES,**  
**AND ALL GO-AHEAD RETAILERS.**  
**JNO. H. SMITH & CO., NEWARK-ON-TRENT.**

## Four Highest Awards -

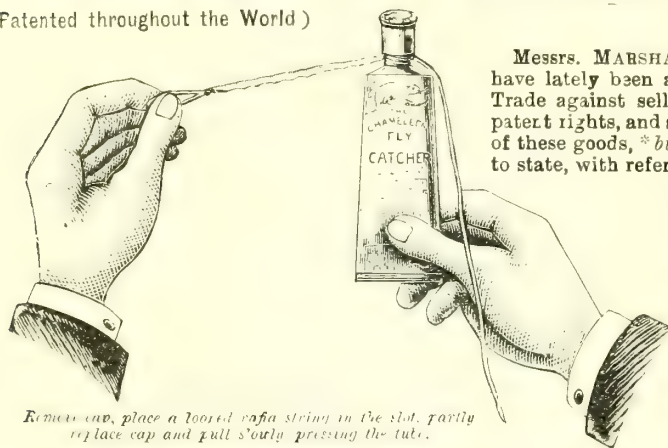
1st Class Diploma and Gold Medal ...	BIRMINGHAM	1899.
1st Class Diploma and Gold Medal ...	PARIS	
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# "CHAMELEON" FLY-CATCHER

(A COLLAPSIBLE TUBE WITH A SLOTTED MOUTHPIECE),

## FOR MAKING STICKY FLY STRINGS.

(Patented throughout the World)



Remove cap, place a loose cap string in the slot, partly replace cap and pull slowly, pressing the tube.

### Notice.

Messrs. MARSHALLS' LTD., the Proprietors of Marshall's Fly Reel, have lately been advertising in the Trade Journals a Caution to the Trade against selling goods which may be an infringement of their patent rights, and stating further, "We give notice that not only makers of these goods, *\*but vendors also will be proceeded against.*" We desire to state, with reference to these notices, that the action instituted by Marshalls' Ltd. against us for infringement of their Fly-Catcher Patent by the manufacture and sale of the "Chameleon" Fly-Catcher was, on the 13th June, 1900, dismissed by Mr. Justice Kekewich with costs.

\* Note, the italics are ours.

### ADVANTAGES:-

- 1.- It is Always Ready.
- 2.- Never Dries Up.
- 3.- Will Keep Any Time.
- 4.- Coats a succession of Strings.
- 5.- And is Guaranteed to make PERFECT Sticky Fly Strings.

The "CHAMELEON" FLY-CATCHER has been patented in all the principal European Countries and British Colonies, the Indian Empire, Egypt, Dominion of Canada, and the United States of America.

FOR PRICES, &c., APPLY TO

**THE "CHAMELEON" PATENTS MANUFACTURING CO., LIM.**  
ST. ANN'S WORKS, ST. ANN'S HILL, WANDSWORTH, LONDON, S.W.

## 53rd YEAR'S SALE

And still unapproachable for killing Flies.

# MATHER'S ORIGINAL CHEMICAL FLY PAPERS.

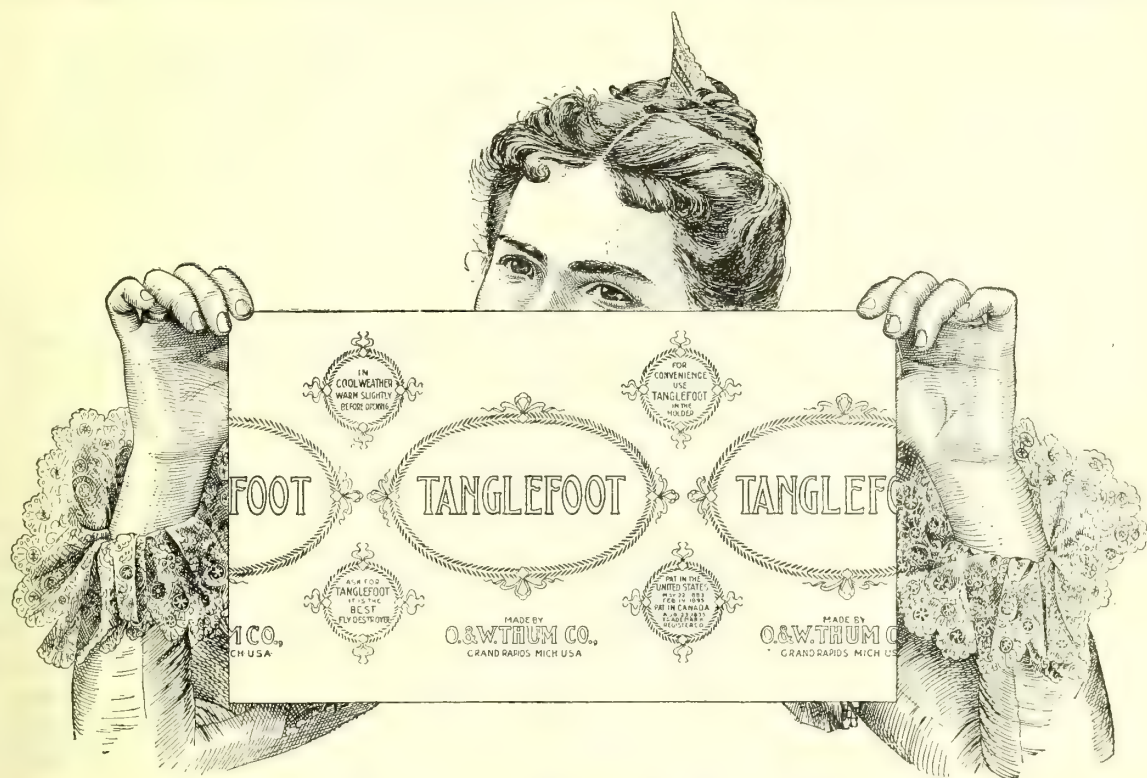
Every Paper guaranteed to kill QUICKLY without torturing the Flies, and are not unsightly in the room like the STICKY FLY PAPERS.

**SPECIAL PRICES ON APPLICATION.**

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London and Export Agents—Messrs. MACE & HALDANE, 94 Milton Street, E.C.





THIS IS AN ILLUSTRATION OF A SHEET OF

# TANGLEFOOT

## FLY PAPER.

SEALED,  
STICKY

NON-  
POISONOUS

Every Sheet Hermetically Sealed.

50 Sheets, like above, in a Cardboard Box. 10 Boxes in a Case.

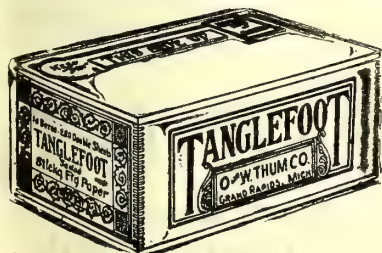
EXPORT—10 Cases are securely packed in a strong crate for Export.

PRICES—1 Case (containing 10 Boxes)... .. 15/-.

5 per cent. Reduction on 5-case orders. Or if you send us 5/- we send you free our Parcel Post Package of 150 sheets.

Sole Importers—**ALABASTINE CO. (British) LIM.**

CHURCH ST., SOUTH LAMBETH, LONDON, S.W.



A Case of Tanglefoot (500 Sheets) 15/-

AND OF  
ALL CHEMISTS'  
SUNDRIESMEN.



150 Sheets per Parcel Post for 5/-



# WELL AHEAD!



“THE CHEMIST AND DRUGGIST”  
of June 23 says:—

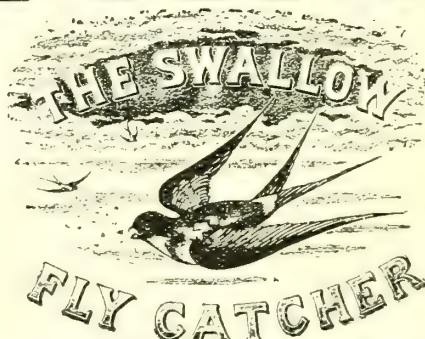
“MESSRS. FORD, SHAPLAND & Co., 6 Great Turnstile, W.C., had a very good exhibit of **Printed Materials** and all kinds of **Chemists' Labels, Books, Showcards, and Counter-bills.** Amongst the last named we noticed several new styles, which indicate that the firm keep well ahead with new competitors. We also observed 1901 calendars with new designs, and numerous examples of cartons and sets of photographic labels with and without spaces for the chemists' own name.”

## STICKY FLY PAPERS

“DEMON”  
FLY LURE

(Registered).

“ADVERTISEMENT”  
FLY PAPER.



SUPERIOR  
TO

ALL OTHERS.

5/- PER GROSS—CASH WITH ORDER.

Also CHEMICAL FLY PAPERS,

Guaranteed to be thoroughly effectual; printed with own Name and Address and Advertisements ON THE FOUR SIDES.  
500, 10/-; 1,000, 15/-; 2,000 at 14/-; 3,000 at 13/-; 5,000 at 12/-; 10,000 at 11/-.

# FORD, SHAPLAND & CO.,

CHEMISTS' & GENERAL PRINTERS, LITHOGRAPHERS, ENGRAVERS, &c.,  
6 GREAT TURNSTILE, HIGH HOLBORN, LONDON, W.C.



# GEORGE MAYOR & CO.

SPICE GRINDERS AND MERCHANTS,

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## Citrate of Magnesia HEALTH SALINE,

Sherbet, Seidlitz Powders, Soda Water Powders, Lemonade Powders,  
Ginger Beer Powders, Seltzogene Charges,  
Magnesia Carb., Senna Leaves, Epsom Salts, Carb. Soda,  
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ALL THE ABOVE PACKED WITH CUSTOMER'S OWN NAME LABEL IF REQUIRED.

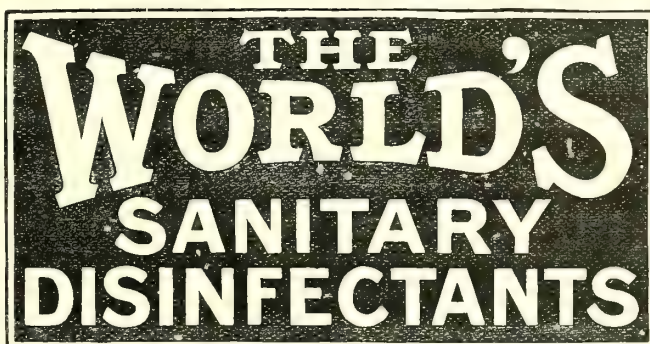
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AS SUPPLIED TO THE  
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PACKED IN BAGS, CASKS, TINS, PACKETS, & BOTTLES.

Powder guaranteed to contain 15% of  
CARBOLIC ACID.

PROPRIETORS AND MANUFACTURERS:

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SOUTHWARK, LONDON, S.E.

**SPECIAL TERMS for EXPORT & LARGE QUANTITIES.**





# BEDDOW'S CARBOLIC DISINFECTANTS ARE THE BEST.

USED ALL OVER THE WORLD.

Send for Price List—BEDDOW & CO., CALCUTTA WORKS, LIMEHOUSE, LONDON, E.

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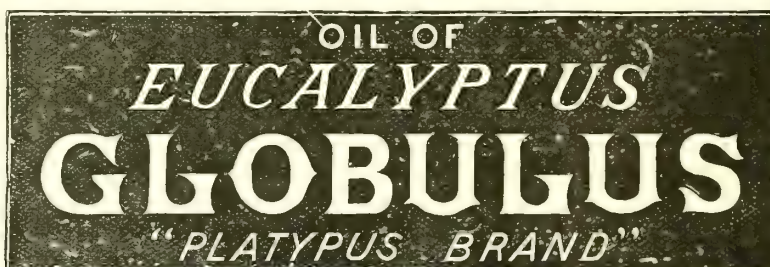
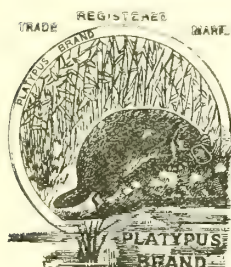
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SOLE MAKER OF  
**GABRIEL & TROKE'S  
GELATINE CAPSULED  
HORSE BALLS.**

Alterative, Condition, Cordial, Cough  
Diuretic, Fever, Physio, Worm, Quinine  
Tonic Balls (Registered 81,291).

GELATINE-COATED DOG AND FOWL PILLS. SAMPLES FREE.



GUARANTEED B.P. 1898. CONTAINS 55 TO 65 PER CENT. EUCALYPTOL.

## TASMANIAN EUCALYPTUS OIL CO.

138 LEADENHALL STREET, LONDON, E.C., and HOBART, TASMANIA.

### Chemists Will Kindly Note

That our well-known and highly approved

### "SNOWDRIFT" PETROLEUM JELLIES

Conform absolutely to the requirements  
of the 1898 B.P. All our preparations  
are of guaranteed high quality and give  
unqualified satisfaction wherever used.

Samples will be sent if requested.

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Telegrams—"Snowdrift London." A B O Code used,  
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MANUFACTURERS OF ALL KINDS OF

### DISINFECTANTS

**SOLUBLE SANITARY FLUID,  
SOLUBLE CREOSOTE,  
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CRUDE CARBOLIC ACID,  
PALE CARBOLIC ACID,  
CARBOLIC CRYSTALS,  
CARBOLIC POWDER,**

Containing 10%, 15%, and 20% Pure Acid, in any kind of  
packages, for Home and Export.

**Patent "Sano" Fluid,**

With delightful Pine Odour, suitable for Private Use.

Write for Samples and Quotations to

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# INSECT POWDER

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Imported Direct, & STOCKS KEPT, by **CHAS. WINDSCHUEGL & CO., 1 LEADENHALL ST., LONDON, E.C.**

*Castor Oil. Nut Oil. Olive Oil. Cocoanut Oil. Sesame Oil. Cotton Oil. Mineral Oils (of every description).*



## CALVERT'S

Original and Only Reliable

Carbolic Disinfectants, Soaps, Ointment, Tooth Powder,  
&c.,



Have been **AWARDED 100 MEDALS and DIPLOMAS** for **SUPERIOR EXCELLENCE.**

Price Lists, Show Cards, Counter Bills, &c., free on application to the Manufacturers,

**F. C. CALVERT & CO., P.O. Box 513, MANCHESTER.**

**MOTH... PREVENTIVES**  
In Various Forms,  
equally Efficacious

**ALABASTRINE**

**TABLETS.**

For placing in Wardrobes  
Chests, Cupboards, &c.  
1s. per box.

**CRYSTALLISED**

**CAMPHELYNE.**

For scattering under  
Carpets, into Crevices  
amongst Furniture, &c.  
1/- per tin.



This Unique  
Preparation  
possesses great  
Stimulating and  
Invigorating  
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Is highly  
recommended  
by the Medical  
Profession.

**AGREEABLE  
IN ODOUR.**

**A LUXURY  
IN THE BATH.**

Special Terms to Chemists and Wholesale Buyers.

# INSECT POWDER



From Closed and Half-Closed Flowers.

Guaranteed from New Season's Crop. In 1-cwt. Kegs.

Send for our Quotations, and buy only a Genuine Guaranteed Article.

## REFINED CAMPHOR BELLS.

ASK OUR PRICE BEFORE BUYING, AND YOUR ORDERS WILL REACH US IN DUE COURSE.

Procurable through all Wholesale Houses, or direct from

**FLEMING'S OIL AND CHEMICAL CO., LIMITED, 101 LEADENHALL ST., E.C.**



# Harvey's Horse Remedies

**HARVEY'S Aconite Powders,**  
For Chronic Cough, Broken Wind, Roaring, &c.  
**HARVEY'S Worm and Condition Powders.**  
**HARVEY'S Watts' Embrocation,**  
or Curb Bottle.  
**HARVEY'S Watts' Red Lotion,**  
For Wounds.  
**HARVEY' Hair Restoring Ointment.**  
**HARVEY'S Edos, or Tasteless Purging Powder.**

*These Remedies are used in most of the Training Stables, Stables of Masters of Hounds, and by many thousands of Private Horse Owners in the United Kingdom and abroad.*

FULLY DESCRIBED IN  
"THE HORSE OWNER'S  
HANDY NOTE BOOK."

136 PAGES. POSTED FREE.  
Circulars and Illustrated Pamphlets  
with Chemist's name on, supplied on  
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For Trade Prices see the Lists of the  
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Price List to the Sole Proprietors,

**HARVEY & CO.**

49 Lower Gardner St.,

**DUBLIN.**

Telegraphic Address—  
"REMEDIES DUBLIN."

**Good Line for  
Agricultural  
Chemists.**

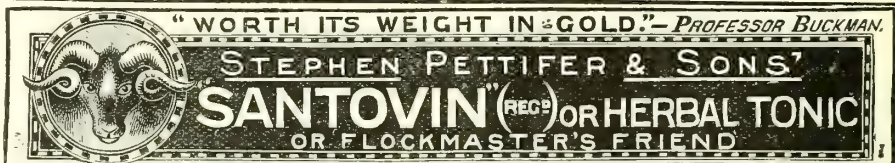
Often sells in quantities  
of ½ and 1 doz. 5/- bottles,  
and even more.

Well Advertised in  
Agricultural Press.

ATTRACTIVE ADVERTISING  
MATTER.

**MOST LIBERAL TERMS.**

*Correspondence solicited.*



NOTE.—"SANTOVIN" is a new name adopted to prevent fraudulent substitution.

A sure Cure and Preventive for Tapeworms, Stomach and Intestinal Worms, Husk or  
Hoose, Fevers, Scour, and Debility in Sheep and Lambs.

In Bottles, 5s. (Thirty to Forty Doses).

PAMPHLET WITH WORLD-WIDE TESTIMONY FREE.

CAUTION.—Beware of Imitations, and NOTE ONLY ADDRESS, Full  
Title, and Trade Mark

SOLE PROPRIETORS:

**STEPHEN PETTIFER & SONS, Malmesbury, Wilts.**

Wholesale from usual Houses:—EDWARDS, BARCLAYS, SANGERS, SUTTONS, WYLEY, &c., &c.



# DAY, SON & HEWITT.

*Largest Makers in the World of*

**HORSE, CATTLE, & SHEEP MEDICINES.**



*The Greatest Animal Restorative of the Age.*

Acts like Magic for

Fret, Colic, or Gripes in Horses

Colds and Chills

Hoven or Blown Cattle and Sheep

Scour or Diarrhoea

General Debility in Stock

PRICE: 1/9 per bottle; 20/- per doz. box.



*Or Inflammation Powder for*

Colds, Indigestion, Costiveness

Red Water, Fevers, Yellows

Hidebound, Loss of Cud, &c.

Specially adapted for

Cows Calving, Ewes Lambing

PRICE: (Cows, &c.) 13/- per doz. Packets.



*The Antidote of Pain, Inflammation, & Gangrene*  
FOR

Wounds, Cuts, Bruises

Sore Shoulders, Saddle Galls

Rheumatism and all Bad Swellings

Broken Knees, Cracked Heels

Strains of Ligaments and Tendons

PRICE: 2/6, 3/6, and 7/- per bottle.

The Great Cure for  
**HUSK, HOOSE, COUGH, &  
TAPEWORMS**

In Heifers, Calves, Sheep,  
and Lambs.



PRICE: 2/9 per bottle; Quart, 10/6; ½-Gallon, 20/-.

The Great Cure for  
**HUSK, HOOSE, COUGH, &  
TAPEWORMS**

In Heifers, Calves, Sheep,  
and Lambs.

Address:—**22 DORSET ST., LONDON, W.** (Liberal Terms to Agents, and full particulars on application.)



# **CHLORIDE OF LIME.**

Steele's Patent Packets Guaranteed Airtight  
and Odourless.

**SPECIALLY SUITABLE FOR EXPORT.**

Samples and Prices on Application.

SOLE MAKERS—

**JOHN C. STEELE & CO.**  
*Manufacturing Chemists, GLASGOW.*

LONDON AGENCY:  
BRYCE & RUMPF, 15 FISH STREET HILL.

Agents wanted for AMERICA, FRANCE, and GERMANY.

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**WYLEYS LIMITED,**  
**COVENTRY,**

INTRODUCERS OF THE

Soluble Gelatine-Coated 'Duraplastic'

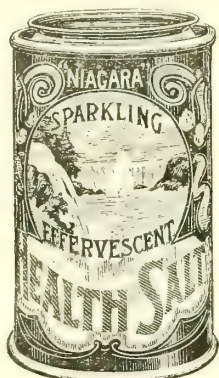
**HORSE BALLS.**

Chemist's Name and Address printed on orders of  
2 Gross Assorted.

***Prices from 18/- Gross.***

Private Formulæ made up and coated.

# SEASONABLE AND SALEABLE LINES FOR THE "HOT WEATHER" AND "SEASIDE" TRADE.

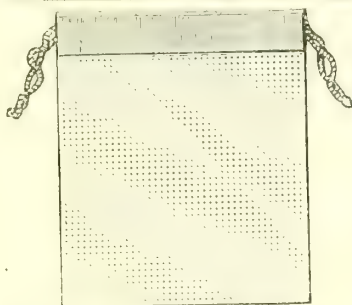


4d., per doz. 2/6.

This enjoys a large sale, and is a good preparation.



6d. Special Roll 3/-; 6d. Regular Roll, 3/6;  
7d., 4/9; 8d., 4/- and 5/-; 9d., 6/-;  
and 1/-, 7/6 doz.



SPONGE BAG.

Good Quality Check Sponge Bags, 3/6, 3/9, 4/6,  
5/6, 6/6, 8/6, and 9/6 doz.



6d., per doz. 4/-; 1/-, per doz. 7/-

"ST. PAUL'S" BRAND.

**Natural Perfumes**

FRAGRANT & LASTING.

Also in 64, 1/2, 1/4, 1/8, 1/16 & 1/32 Bottles.

3d.  
EACH

FULL CARD CONTAINS 12

Proprietors: F. NEWBERRY & SONS, London, E.C.

Chemist's Stocks now need to be replenished for Summer Sale, and those who have not yet tried the "St. Paul's" Brand Perfumes will find it pay to order a small initial assortment.

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6d., 3/9 per doz.; 1/-, 7/- per doz., &c., &c.

**NEWGATE FLY PAPER**

THE FLIES PRISON HOUSE

**F. NEWBERRY & SONS.**

27 & 28 Charterhouse Sq.,  
LONDON, E.C.

"NEWGATE" STICKY FLY PAPERS.

These are THE Line of the Season. Sell at 1/- each.  
Per gross 4/8.

## SHOWROOM ON GROUND FLOOR.

Any Chemist, whether a Customer or not, will be gladly shown round and not "hustled" for orders, but of course orders will be taken with pleasure if anything is seen suitable for purchase.

A few of the goods to be seen in Showroom are Cameras and Photographic Sundries, Smelling Salt Bottles, Perfume Bottles, Hair Brushes, Nail and Tooth Brushes, Enemas, Sponges, Soothers, Barometers, Celluloid Goods, Combs of all sorts, Sponge Bags, Bathing Caps, &c., &c.  
Also on view a full line of Messrs. W. R. Warner & Co.'s Sugar-coated Pills and high-class Pharmaceutical Products.

"NEWBERRY'S CATALOGUE FOR 1900" is now in binders' hands, and applications will be satisfied as soon as practicable.

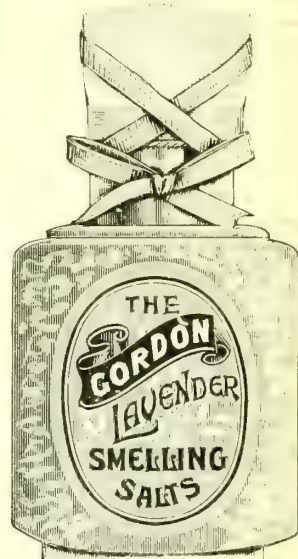
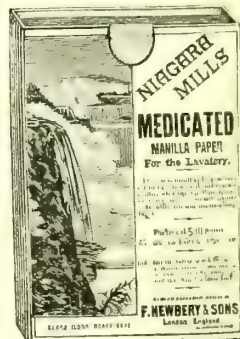


Figure shows actual size.  
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Per doz. 9/-

FLESH GLOVES.



3d. Turco, 1/10 and 2/2; 6d. Turco, 2/6, 2/8, & 3/-; 1/- Turco, 4/- & 5/- per doz. pairs, &c., &c.

SPRAY PRODUCER.



Double Bellows from 14/- doz.  
Fig. 035. Crystal, per doz. 21/-

**FRANCIS NEWBERRY & SONS,** Druggists' Sundriesmen and Wholesale Perfumers, 27 & 28 CHARTERHOUSE SQ., LONDON, E.C.



# LYNCH'S

**A BOON TO CHEMISTS!**



## THE LYNCHGATE PEN.

Prize Medal,



Sydney, 1879.



These Pens are of the highest finish and best quality, being made of Vulcanite, beautifully engraved, and fitted with a solid gold nib, with platino-iridium point, which runs smoothly over any surface. Every Pen is guaranteed, and is quite equal to the best half-guinea pen in the market.

Price, complete in box, with filler, **45s. doz.**, less usual discount.

### MARVEL ATOMIZER.



14/6 per doz.  
Less usual Discount.

### PATENT SAFETY ENEMA.

60/- doz., less Discount.



No Possibility of Injecting Air. Always ready for use.  
Forms its own Reservoir. All parts are enclosed in Box.  
Will last many Years.

The above illustration represents an Enema which is arranged so that the box will form the reservoir for the fluid to be injected. By being used in this way any possibility of injecting air is avoided, owing to the fact that the suction end of Enema is screwed into bottom of reservoir. It is light and portable, and most suitable for travelling. The Enema is made of the finest quality rubber in one continuous length, and will last for many years with ordinary usage; it is also fitted with our patent non-corrosive glass valves. The reservoir which forms the box is made of iron, enamelled inside and out.

Fitted with improved Stopcock, as suggested by

W. D. JEFFERSON, M.R.O.S.

### LYNCH'S COMBINATION INHALER, FOR MOUTH AND NOSE.

(REGISTERED.)



To be used for Inhalations of Iodine, Terebene, Eucalypti, &c., for Sore Throats, Bronchial Affections, Nasal Catarrh, Hay Fever, &c.  
Complete in handsome maroon box, richly gilt, with Bottle for Medicament, and Cotton Wool.

8/6 per dozen, less usual Discount.

**LONDON DEPOT FOR:**  
KNICKERBOCKER BRACES,  
SEAMLESS RUBBER CO.,  
TYRIAN DOUCHES AND SPRAYS,  
DAVIDSON'S SYRINGES,  
WIZARD CAMERAS,  
AND OTHER AMERICAN SPECIALITIES.

Special Terms on application to Wholesale Trade  
and Shippers.

# LYNCH & CO., LTD., LONDON.

This interests **YOU** 

Our 6d. Tins of

# LIQUORICE WAFERS

SELL AT SIGHT, and show a  
**HANDSOME PROFIT**  
to the Retailer.

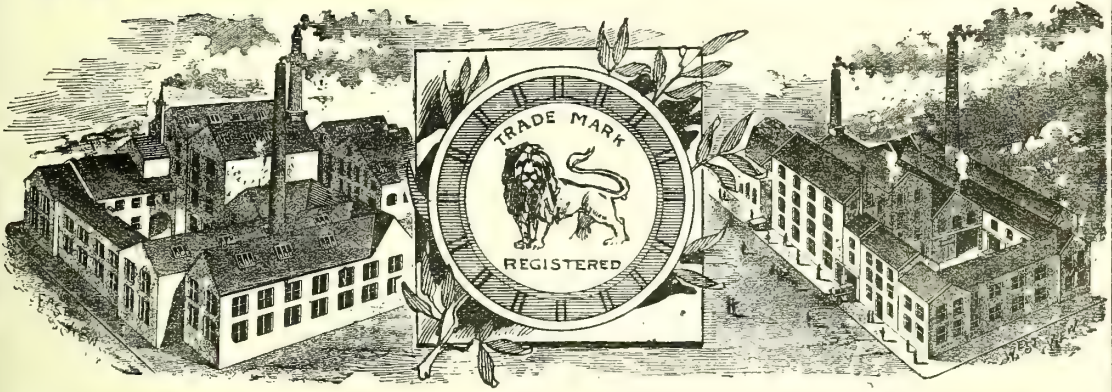
There is no finer Liquorice Confectionery  
made, and none so attractively  
put up.

MAY WE SEND YOU A SAMPLE TIN ?

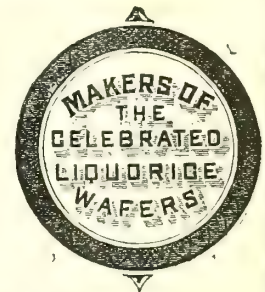
**WILKINSON & CO.**  
**PONTEFRACT.**



# Hillaby's, Limited



## Pontefract



**YOU ARE THE LOSER, NOT WE!**

Our Goods are being widely advertised by **SAMPLES** and through the Press; and the demand is daily increasing. The high standard of **PURITY** which characterises our preparations - as compared with others on the market - is known and appreciated far and wide; hence the public

**WILL HAVE HILLABY'S!**

and if **YOU** do not stock them, they will get them elsewhere.

**REMEMBER** they bring

**A QUICK SALE** and

**A LARGE PROFIT** to retailers!

# HILLABY'S

**LIQUORICE WAFERS** (Guaranteed Pure Extract)  
**PONTEFRAC T CAKES**  
**LIQUORICE PELLETS**  
**LIQUORICE & CHLORODYNE LOZENGES**

**The Finest, Purest, and Best ever made.**

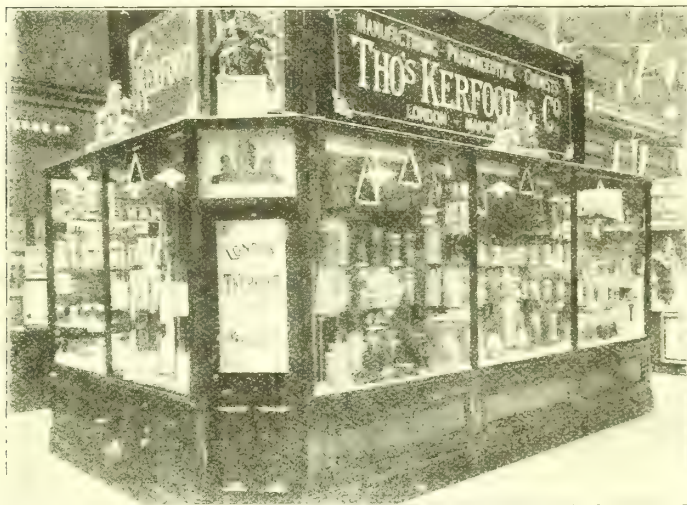
**HILLABY'S, LTD., LION WORKS, PONTEFRAC T.**

**FREE  
SAMPLE**  
ON APPLICATION



# "EVERYTHING PHARMACEUTICAL INTO WHICH SUGAR ENTERS."

Our Exhibit at THE CHEMISTS' EXHIBITION, ST. JAMES'S HALL, MANCHESTER.



"THE CHEMIST AND DRUGGIST" reports on our Stand and Specialities as follows:—

MESSRS. T. KERFOOT & CO., of Ashton-under-Lyne, had a splendid square showcase devoted to their manufacture, which comprised everything pharmaceutical into which sugar enters. This was divided into nine distinct sections—viz., medicated lozenges, floral cachous, pastilles and jujubes, infants' foods and emulsions, capsules, coated compressions, granular preparations, coated pills, and perfumes. Messrs. Kerfoot manufacture these goods in very large quantities, and they undertake the coating of pills for wholesale houses, having very extensive plant both for sugar and pearl coating. There were some handsome specimens of coated pills in brilliant art colours, if we may apply the word 'art' to this department of physics. The coated compressions or tablets were also pretty examples of elegant confectionery, Cascara Sagrada extract thinly coated with chocolate being one of the most attractive of the series. In floral cachous Kerfoot's "Sweet Lips" retains its immense popularity, which, Mr. Kerfoot explains, is due to the fact that it is an antiseptic lozenge as well as a breath-perfume. Messrs. Kerfoot's effervescent preparations are called "bi-granular," because the alkaline or bicarbonate portion is separately granulated from the acid portion, and the medication is mixed with the acid or the alkali, according to its nature. The granules are made in definite proportions, and the requisite amounts of each kind afterwards thoroughly blended. One result of this is that practically no loss of carbonic acid occurs in the granulation-process, and the finished preparation retains its qualities unimpaired for years, the effervescence being as brisk in a five-year-old sample as in one made only five minutes before. Messrs. Kerfoot display all their goods in a most attractive manner.

## THOMAS KERFOOT & CO.,

MANUFACTURING  
PHARMACEUTICAL  
CHEMISTS.

LABORATORIES,  
&c.

Bardsley Vale Mills,  
Ashton-under-Lyne, nr. Manchester.

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MAKERS OF MEDICATED LOZENGES AND JUJUBES.

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SEND FOR LIST, SAMPLES, AND COMPARE.

TELEPHONE 235. TELEGRAMS "GUESTO."

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Treble Strength and Bright.  
LIQUID, CAKE, or ROLL.

Special Prices to Large Buyers.

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J. W. BAKER (late Clements),  
York St., St. Paul's, BRISTOL.



Write for Catalogue of **LIGHT DELIVERY CARTS,**  
with **AERATED-WATER RACKS.**

Five Specially-constructed Models for Chemists,  
use to select from.

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Parcel Cart and Invalid Carriage Manufacturers,  
Summer Row, BIRMINGHAM.



CADBURY'S COCOA IS ABSOLUTELY PURE—THEREFORE BEST.

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# COCOA

SCENE ON A TRINIDAD COCOA ESTATE.

It contains all the full nourishing properties of the Cocoa bean, without any foreign admixture whatsoever. It represents, according to the *Lancet*, "The standard of highest purity."

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"Undoubted Purity and Strength."—*Medical Magazine*.

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FAVoured BY THE HOMES AND HOSPITALS OF GREAT BRITAIN.

### van Houten's Cocoa

The "LANCET" says:—"Pure and unmixed." "Delicate aroma."  
"Cheaper to use in the end."

#### FRESH LEMON AND BITTER ORANGE PEEL

In accordance with the new B.P. of 1898.  
Cut by Hand by the most skilful cutters, and highly com-  
mended by leading firms.

#### ALSO MANUFACTURER OF ALL KINDS OF DRIED ORANGE & LEMON PEEL

ENGLISH CUT ONLY.  
THE CHEAPEST AND BEST IN THE TRADE.

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15 MOUNTFORD ST., UNION ST., LONDON, EAST.

#### LEMON SQUASH AND LIME JUICE CORDIAL (Filtered Bright).

	LEMON SQUASH.	LIME JUICE CORDIAL.
Reputed Pint Square White Glass Stoppered Bots.	3/9	4/- per doz.
Do. Quart " " " "	6/-	6/6 "
Do. Pint Round Bots. " " "	3/6	3/9 "
Do. Quart " " " "	5/6	5/9 "

Less than 6 dozen Quarts in one delivery .. .. 6d. per doz. extra.  
Less than 12 dozen Pints " " " " .. .. 3d. " "

IN BULK 1/9 PER GALLON. Delivery free in London.

SAMPLES ON APPLICATION.

**CHAS. SOUTHWELL & CO.**  
Wholesale Confectioners, DOCKHEAD, S.E.



# \*—\* SKRINE'S —\*

## CHINBARA DIGESTIVE TEA.

**T**HIS Tea is manufactured for Chemists only by Mr. E. H. SKRINE, and is a pure unblended Tea, made from the carefully selected and prepared leaf as grown on Mr. E. H. Skrine's Ceylon Estates, and is placed on the market to meet the increasing demand for a pure, wholesome, high-class Tea.

In view of contingencies in China, it is well to be supplied with a Pure Tea manufactured on the best China principles.

The **CHINBARA BRAND** is the ideal Tea for sufferers from **Indigestion, Sleeplessness, Nervous Head-aches, and all forms of Nervous Prostration**, and can be taken with beneficial results in cases where ordinary Tea would be forbidden. For this reason it is highly recommended by the Medical Profession, and was awarded the Gold Medal (the highest Award), at the Bath Century Exhibition, 1900.

CHINBARA TEA is sold in packets only, and is manufactured in three qualities. In order to induce Retail Chemists to take up the sale of this Tea a Trial order of 18 lbs. or 36 lbs. (all in  $\frac{1}{4}$  lb. Packets, but assorted in the three qualities or as desired), may be purchased through any Wholesale House, or direct from the Depot on receipt of Cash. This first order will be accompanied by a free gift of quarter pound sample packets, equivalent to 10 per cent. of the order, for distribution among the Chemist's customers.

An order for 36 lbs. of Tea would average about **£3 14s. nett.** The Chemist will therefore receive **7/4** worth of Tea for free distribution.

Not a pound of this Tea need be kept in stock by the Wholesale House. The retailer will send in his order to the wholesaler, who will charge his account with the amount of the order, but the Tea can be sent direct to the retailer from the Head Depot, and will thus be perfectly fresh.

### Additional Advantages.

The Tea must be kept **IN THE BOX** in which it is sent out, but dummy packets will be supplied for Window and Counter Display. A framed Gold Medal Diploma Card will also be sent for exhibition in the shop, and circulars for counter distribution.

Agents will only be appointed in the proportion of one to every 4,000 inhabitants. The Tea is on the P.A.T.A. Protected List, and full prices will be maintained.

### THE PRICES ARE AS FOLLOWS:—

				Minimum Retail Price	Minimum Wholesale Price
No. 1—CHINBARA DRAWING-ROOM TEA, per 1-lb. packet,				3/-	2/6
"	"	"	" $\frac{1}{2}$ "	1/6	1/3
"	"	"	" $\frac{1}{4}$ "	9d.	7½d.
No. 2—CHINBARA BREAKFAST TEA	...	"	" 1 "	2/6	2/1
"	"	"	" $\frac{1}{2}$ "	1/3	1/0½
"	"	"	" $\frac{1}{4}$ "	8d.	6½d.
No. 3—CHINBARA HOUSEHOLD TEA	...	"	" 1 "	2/-	1/8
"	"	"	" $\frac{1}{2}$ "	1/-	10d.
"	"	"	" $\frac{1}{4}$ "	6d.	5d.

**GENERAL TERMS.**—All orders for less value than **£10** must be accompanied by a cash remittance, or be sent through a Wholesale House.

*Special Terms to Shippers and large buyers.*

## Head Depot : 5 Victoria Avenue, Bishopsgate Without, London, E.C.

*N.B.—Every Chemist will shortly receive a copy of Mr. E. H. Skrine's "History of Tea," entitled "Chinbara," which he is particularly asked to read.*

**INVALUABLE FOR INVALIDS.**

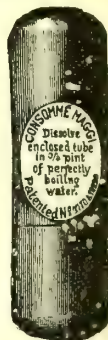
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**CONSOMME**

*As supplied to Members of the Royal Family.*

In Gelatine Tubes. Each Tube makes  $\frac{3}{4}$  pt. Strong Soup  
Boxes of Ten Tubes, 1/8; post free, 1/9 $\frac{1}{2}$ .

Supplied in Bulk for Hospital use in Blocks of 1 lb., at  
10/- per block.



**The Lancet** says: "Of great service and convenience in the invalid's dietary."

**The Hospital** says: "An inestimable boon . . . we recommend our readers to give them a trial."

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**An assured Profit of over 30 per cent.**

may be realised by chemists on the sale of

**INVALID BOVRIL,**

A special form of Bovril without seasoning, and more highly concentrated than the ordinary variety.

ONE OF THE PIONEER PREPARATIONS ON THE P.A.T.A. LIST.

The above-named percentage is the average profit on the three sizes: 2, 4 and 8 oz. jars.

As INVALID BOVRIL is now warmly recommended by most medical men, and the public demand in consequence steadily increasing, chemists who keep well stocked should find Invalid Bovril a highly appreciable source of profit.

**BOVRIL LIMITED, Food Specialists and Hospital Purveyors, LONDON.**

# MALTED COOKED FOOD FOR INFANTS.

***Specially Prepared for Chemists.***

In  $\frac{1}{2}$ -lb., 1-lb., and 2-lb. Tins (unlabelled); also in Bulk.

.....  
This Article shows a Large Profit to Retailers.  
.....

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**GEO. KING & CO., Sycamore Street, LONDON, E.C.**



THE MOST ECONOMIC, CONVENIENT, & PORTABLE FORM OF SOUP.

# LAZENBY'S SOUP SQUARES

THESE SQUARES ARE PREPARED IN 13 VARIETIES (MULLIGATAWNY, JULIENNE, GRAVY, &c.) AND SHOULD FIND A PLACE IN EVERY STORE-ROOM, BEING INVALUABLE FOR MAKING SOUP AT SHORT NOTICE OR IMPROVING STOCK. THEY WILL KEEP GOOD ANY REASONABLE LENGTH OF TIME AND ARE PACKED IN NEAT BOXES CONTAINING 6 & 12 SQUARES.

**ONE 6<sup>p</sup> SQUARE  
WILL MAKE A PINT & A HALF  
OF STRONG NUTRITIOUS SOUP**

SOLD BY ALL THE LEADING GROCERS AND STORES.

Should any difficulty be experienced in obtaining the Squares, please communicate at once with the Manufacturers,

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# Nestlé's

CONDENSED  
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# Milk.

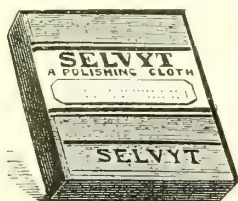
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Six Samples of NESTLÉ'S MILK bought at random at six different shops, and analysed by Mr. OTTO HEHNER, late President of the Society of Public Analysts, contained AN AVERAGE OF

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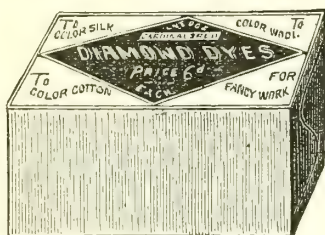
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**THE VERY LATEST.**

One only each of above fastened upon a handsome Imitation Leather Closing Portfolio, 30 by 30 inches, with first order.

Cloths only charged.

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The DIAMOND DYES are being advertised on a liberal scale, and should be kept in stock by all enterprising dealers.

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3d. " .. .. " 1/10

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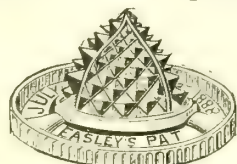
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For cleansing and polishing Brass, Copper, and all highly-finished Metals with least possible labour.

Put up in Stone Bottles with Patent Capsuls.

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Per doz. 3/3 4/6 8/- 12/-

Free Sample on application.

**EASLEY'S  
Genuine Lemon Squeezers.**

Neatly packed in sub divided Boxes of 1 dozen.

Per dozen .. .. 1/10

Special price for quantity.



"I made it myself—the

**LIGHTNING FREEZER** { RUNS EASY

is the reason for its excellence."

Makes light, smooth, velvety Ice Cream with surprising quickness.

1 to 32 quarts still in stock, but we may be out of one or two sizes in a few days. The demand this season has been terrific.

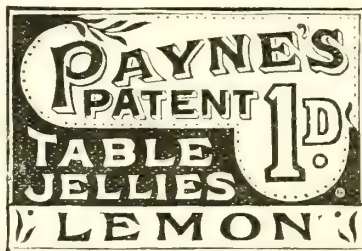
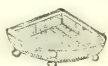
Also every part of a "LIGHTNING" Freezer.

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AND  
"SANITARY" SINK BASKETS.

We have purchased PATENTS, TRADE-MARKS, GOODWILL, and ENTIRE STOCK of above, and have Sole Control of them.

£10,000 worth of Stock in all kinds and sizes.  
NO ADVANCE WHILE STOCK LASTS.



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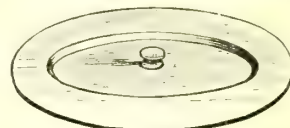
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Should be in use in every Household and Institution in the Kingdom.

Recommended by the Highest Medical Authorities and Journals.

Per dozen .. .. 9/-

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FLY CEMETERY.

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"LITTLE WONDER" TRAP.

BALLOON FLY TRAP.

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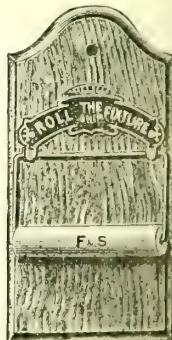
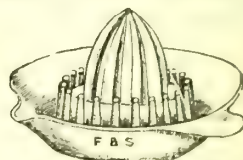
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Complete with Saucer and Lip.

Per dozen .. .. 3/6  
Many other kinds of Lemon Juice Extractors in Stock.

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KING'S CROSS,



## INDEX TO ADVERTISEMENTS

APPEARING IN THIS ISSUE.

	PAGE		PAGE		PAGE
Addis, W., & Son.....	114	Davies, Gibbins & Co. ....	155	Kemp, W., & Sons .....	157
Alabastine Co. (British) (Lim.)	41	Davol Rubber Co. ....	182	Kent, G. B., & Sons (Lim.)	101, 102, 103
Alexandre, L. ....	205	Davy, Hill & Son, Yates & Hicks	154	Kerfoot, Thos., & Co. ....	52
Allen & Hanburys (Lim.)	27, 28, 29, 30, 31, 32	Day, Son & Hewitt .....	46	Kilner Bros. ....	195, 197
Allen, Stafford, & Sons (Lim.)	98	Dee Oil Co. (Lim.) .....	118	King, G., & Co. ....	56
Allison, Johnson & Forster (Ld.)	133	Delatour, L. & A., Freres ..	205	Krohne & Besemann .....	211
Alstrom, C. ....	144	Denoual, Jules, & Co. ....	170		
Amberg File and Index Co. ....	20	Denton, S. G. ....	190		
American Magnesia Co., The ..	148	De St. Da'mas, A. E. & Co. .	224		
Anglo-American Drug Co. (Lim.)	134	Duncan, Flockhart & Co., Ltd.	143		
Anglo-Continental Chemical Works (Lim.)	85	Dusek Bros. & Co. ....	44		
Antikito Toilet Co. ....	217	Edgar's Croup Lotion (Lim.)	176		
Apollinaris Co. (Lim.) .....	186	Edinburgh Central School ..	210		
Archimedean Co. ....	123	Edwards' Harlene Co. ....	110		
Armour & Co. ....	223	Elison, F. E. (Lim.) .....	11		
Ashton & Parsons (Lim.) .....	185	Eno, J. C. (Lim.) .....	161		
Austin & Co. ....	185	Eschmann Bros. & Walsh ..	183		
		Evans, Lescher & Webb ..	14, 18, 97, 99, 111, 153, 164, 165, 183, 185, 187, 189, 190, 200, 220		
Bailey, W. H., & Son .....	122	Evans and Sons (Lim.) .....	14, 18, 97, 99, 111, 153, 164, 165, 183, 185, 187, 189, 190, 200		
Baker & Co. ....	14	Evans, Sons & Co. ....	14, 18, 97, 99, 111, 153, 164, 165, 183, 185, 187, 189, 190, 200		
Baker, J. W. ....	52	Ewen, J., & Sons .....	87		
Barclay & Sons (Lim.) .....	61	Exchange Column .....	Col. Supp.		
Barker, F. H. ....	218				
Barker, R. W. ....	134	Fairchild Bros. & Foster .....	132		
Barnett & Foster .....	66, 67	Farina, J. M. ....	100		
Barrett, R. H. ....	205	Fassett & Johnson .....	166, 167, 192		
Barron, Harveys & Co. ....	163	Fellows Mfg. Co. ....	133		
Baddow & Co. ....	44	Fentiman, A. J., & Co. ....	204		
Beecham, T. ....	172	Ferber, R., & Co. ....	168		
Beeswax Co. (Lim.) .....	118	Feris & Co. ....	159		
Beiersdorf, P., & Co. ....	184	Findlay, J. J., & Co. ....	126		
Benger, F. B., & Co. (Lim.)	128	Fink, F., & Co. ....	204		
Bennett, Sons & Shears (Lim.)	25	Fleming's Oil & Chemical Co. (Lim.)	45		
Bentley, J. ....	87	Fletcher Bros. & Co. ....	224		
Berkfeld Filter Co. (Lim.) ..	83	Fletcher, Fletcher & Co. (Lim.)	128		
Bersdale (Lim.) .....	121	Ford, Shapland & Co. ....	42		
Boehring, O. F., & Soehne ..	135	Fordham, W. B., & Sons (Lim.)	53		
Bord & Son .....	118	Fullwood, R. J., & Bland ..	86		
Botwright & Grey .....	21				
Bovril (Lim.) .....	56	Galen Manufacturing Co. (Lim.)	200		
Bowen & McKechnie .....	78	Gardner, C. ....	24		
Bowers Bros. ....	10	Gardner, W., & Sons .....	26		
Bowling & Govier .....	10	Geraut, E., & Co. ....	68		
Brand & Co. (Lim.) .....	82	Gibbs, D. & W. (Lim.) .....	116		
Brecknell, Turner & Co. (Lim.)	97	Glasgow School of Pharmacy ..	215		
British Machine Co. (Lim.) ..	144	Goddon (Lim.) .....	38		
British Siamose Co. (Lim.) ..	145	Goerz, C. P. ....	16		
Bronley, H., & Co. (Lim.) ..	171	Goodall, Backhouse & Co. ....	146		
Browning, A. J. (Lim.) .....	204	Greensill & Co. ....	109		
Burge, Warren & Ridgley ..	188	Guest, T., & Co. ....	52		
Burgoyne, Burdidges & Co. .	181				
Burrongs, J. (Lim.) .....	118	Hanger, Watson & Harris (Lim.)	202		
Burrongs, Wellcome & Co. .	124, 125, 126, 127	Harker, C. R., Stagg & Morgan	162		
Bush, W. J., & Co. (Lim.) ..	107	Harrington Bros. ....	16		
Butcher, W., & Son .....	17	Harrison & Waide .....	20		
Bygrave, J. & W. ....	14	Harvey & Co. ....	46		
		Harvey, S. (Lim.) .....	113		
Cadbury Bros. ....	53, Cover	Hatrick, J. L., & Co. (Lim.)	187		
Calvert, F. O., & Co. ....	45	Hawkesley, T. ....	86		
Camwel (Lim.) .....	73, 75	Hay, Wm. (Lim.) .....	71		
Carbonic Acid Gas Co. ....	79	Hearns (Lim.) .....	205		
Carson, H. J. ....	178	Hebden, H. ....	205		
Cartwright, A. S. ....	217	Henry, T. & W. ....	140, 141		
Central School of Pharmacy ..	211	Hewlett, C. J., & Son .....	159		
Chameleon Patents Mfg. Co. (Lim.)	40	Hillaby, J. (Lim.) .....	5		
Chapman, J. O., & Co. ....	205	Houghton, G., & Son .....	15		
Chesebrough Manufacturing Co.	128	Hovenden, R., & Sons .....	112		
Clark, S., & Co. ....	12	Howard & Sons .....	131		
Cohen, I. & M. ....	115	Howlett, S., & Son .....	10		
Coleman & Co. (Lim.) .....	80	Hubbuck, T., & Sons (Lim.)	168		
Colton, Arthur .....	22, 23	Hull Oil Mfg. Co. (Lim.) ..	151		
Comitti, O., Son, Wells & Lyon (Lim.)	19	Hunyadi Janos .....	87		
Congreve, G. T. ....	170				
Cook, E., & Co. (Lim.) .....	103	Idris & Co. (Lim.) .....	10, 69, 70		
Coombs' Malted Food Co. (Lim.)	80	Imperial College of Pharmacy ..	210		
Cooper & Co. ....	139	Imperial Quinine Co. ....	144		
Corbyn, Stacey & Co. (Lim.)	92	Ingram & Royle (Lim.) .....	65, 87		
Oorio, F. A. ....	204	Isaacs & Co. ....	189		
Corsan, J. R. ....	10				
Cosenza Co. ....	56	Jackson, T. ....	108		
Cox, H. W. (Lim.) .....	19	Jeancard, Gazan & Doumin	93, 94, 95		
Crawshaw, E., & Co. ....	109	Jewbury & Brown .....	111		
Cresswell Brothers & Schmitz	88, 89, 90, 91	Jones & Co. ....	118		
Crown Crystalline Co. ....	169	Joseph, Philip, & Son .....	6, 7		
		Kay Bros. (Lim.) .....	38		
Daisy (Lim.) .....	177, 178, 179, 180	Kearsley, O. & G. ....	170		
Dalton, J., & E., & Co. (Lim.)	202	Relpton Co. ....	205		
Darton, Gibbs Co. ....	265				
Davenport, J. T. ....	150	Raines, Clark & Co. ....	159		
		Raines & Co. ....	151		
		Randall & Co. ....	163		
		Ransom, W., & Sons .....	97		
		Raphael, J., & Co. ....	21		
		Raynaud, Claude, & Co. ....	97		
		Raynes, H. & M. ....	205		
		Resinol Chem. Co. ....	133		
		Richards, J. M. ....	149		
		Riddle, A., & Co. ....	76		
		Ringrose & Cobb .....	204		
		Roberts & Sheppey .....	183		
		Robinson, B. ....	77		
		Ross (Lim.) .....	18		
		Rothschild & Baker .....	12		
		Saccharin Corporation (Lim.)	74, 75		
		Sainsbury, S. ....	92		
		Salutary Water Co. ....	76		
		Sanger, J., & Sons .....	222		
		Sanitas Co. (Lim.) .....	129, Text		
		Schutze, F., & Co. ....	108, 116		
		Scott, Greenwood & Co. ....	217		
		Scottish Acid & Alkali Co. (Lim.)	170		
		Scottish Sugar Coated Pill Co.	170		
		Scrubbs & Co. ....	109		
		Seabrook Bros. & Co. ....	19		
		Sharland & Co. ....	137		
		Shavo Shaving Cream Co. ....	111		
		Sheffield College .....	215		
		Shew, J. F., & Co. ....	18		
		Shirley Bros. ....	119		
		Skirne's Chimbura Digestive Tea	65		
		Smith, B. A., & Co. ....	136		
		Smith, J. H., & Co. ....	39		
		Smith, T. & H., & Co. ....	169		
		Snwdon, Sons & Co. (Lim.)	44		
		Solport Bros. ....	191		
		South London School of Pharmacy	203		
		Southwell, Chas., & Co. ....	54		
		Sozio & Andrioli .....	97		
		Spaula Publishing Co. ....	219		
		Spencer & Son .....	204		
		Spurway & Cie. ....	96		
		Squire & Sons .....	21, 130		
		Steele, J. C., & Co. ....	47		
		Stern Bros. ....	120		
		Stevenson & Howell (Lim.)	2, 3, 4, 5		
		Stipendium Stopper Co. (Lim.)	185		
		Strong, Christy .....	36, 37		
		Sutton, O., & Co. ....	111		
		Tasmanian Eucalyptus Oil Co.	44		
		Taylor & Colledge .....	136		
		Taylor, F. H., & Co. ....	190		
		Thiellay, E. H. ....	204		
		Toogood, W. ....	181		
		Toomey, J. ....	54		
		Tower Tea (Lim.) .....	87		
		Treble, G., & Son .....	13		
		Tunbridge & Wright .....	35, 34, 35		
		Tyke & King .....	142		
		Tyler, Thos., & Co. (Lim.)	152		
		Van Abbott, G., & Sons .....	204		
		Van Houten .....	51		
		Van Oppen & Co. ....	111		
		Vasogenfabrik, Pearson & Co.,	1-4		
		Vi-Cocca (Lim.) .....	5		
		Virol (Lim.) .....	64		
		Volcanic Aeration Co. ....	77		
		Voss, W., & Co. ....	234		
		Walker, Troke & Co. ....	44		
		Wallach Bros. ....	121		
		Warrick Bros. ....	97		
		Washington Chemical Co. ....	163		
		Waterston, Geo., & Sons .....	221		
		Watson & Wates .....	205		
		Werner, Pfeiderer & Perkins (Lim.)	148		
		West, T. ....	97		
		West of Scotland School .....	36		
		Western Pharmacies Co. ....	53		
		Westminster College .....	210		
		White, A., & Sons .....	160		
		Wilcox, Jozean, & Co. ....	158		
		Wilkinson & Co. ....	50		
		Willcox, W. H., & Co. (Lim.)	24		
		Willows, Francis, Butler & Thompson	121		
		Windschuegl, Chas., & Co. ....	45		
		Wood, V. ....	185, 187		
		Wright, F., Mundy & Co. ....	81		
		Wyleys (Lim.) .....	47		
		Youlden, E. ....	198		
		York Glass Co. (Lim.) .....	199		
		Zimmer & Co. ....	202		



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Sharland & Co.

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Davy, Hill & Son, Yates & Hicks  
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Kimmond & Co.  
Mills & Co. (Bourne)  
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Wilcox & Co.

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Tyler, Hayward & Co.

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Brumstedt, H.  
Lennon, G. B. & Co. (N.Z.)  
Peake, Allen & Co.  
Taylor & Colledge

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Scrubb & Co.  
White, A., & Sons

## ANNATTO

Baker, J. W.  
Crawshaw, E., & Co.

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Woolley, J., Sons & Co.

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Beeswax Co., Lim.  
Bowdler, W. H. & Co.  
Evans, Sons & Co.

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Jackson, T.

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Howards & Sons  
May & Baker, Lim.

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Howards & Sons  
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White, Alfred, & Son

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Muker, Dr. Anal Chem.  
Southall Bros. & Barclay  
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Barnett & Foster  
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Gilbertson, H., & Sons, Lim.  
Hearns, Lim.  
Isaacs & Co. | Kilner Bros.  
Lynch & Co., Lim.  
Maw, S., Son & Thompson  
Potts, H., & Co.  
Stipendium Stopper Co., Lim.  
Taylor, F. H., & Co.  
Toogood, W.  
York Glass Co., Lim.  
Youldon, E.

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Evans, Sons & Co.  
Kent, G. B., & Son  
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Evans, Sons & Co.  
Hovenden & Sons  
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Cooper & Co.  
Sangers, J., & Son

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Bleasdale & Co., Lim.  
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Fletcher, F.  
Lloyd, T. H., & Co.  
Raines & Co.  
Warrick Bros.

## CAMPOR

Howards & Sons  
May & Baker, Lim.

## CARBOLIC ACID

Howards & Sons  
Camwall, Lim.

## CAPSULES

Allen & Hanbury's, Lim.  
Denoual, J., & Co.  
Duncan, Flockhart & Co.  
Evans, Lescher & Webb  
Ferber, R., & Co.  
Lloyd, T. Howard, & Co.  
Lothouse & Salmter  
Mason, C. E., & Co.  
Warrick Bros.

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Carbonic Acid Gas Co.

## CARRIER TRICYCLES

AND HANDCARTS

Rothschild & Baker

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Ferris & Co.  
Galen Manufacturing Co., Lim.  
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Parke, Davis & Co.

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Levermore, Aug., & Co.

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Brunner, Mond & Co., Lim.  
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Evans, Lescher & Webb  
Evans, Sons & Co.  
Goodall, Backhouse & Co.  
Howards & Sons (Horn)  
Lothouse & Salmter  
Macfarlan, J. F., & Co.  
May & Baker, Lim.  
Merck, E.  
Sanitas Co., Lim.  
Scottish Acid & Alkali Co., Ltd.  
Smith, B. A., & Co.  
Smith, T. H., & Co.  
Tyke & King  
Tyler, T., & Co., Lim.  
Voss, Walter, & Co.  
Washington Chemical Co.  
White, A., & Son

## CHEST PROTECTORS

Liverpool Patent Lint Co.  
Maw, S., Son & Thompson  
Solport Bros.  
Wood, Vincent

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Helden, W. C.

Steele, J. C., & Co.

## CHLORODYNE

Dayenport (Browne)

## CHLOROFORM

Duncan, Flockhart & Co.  
Macfarlan, J. F., & Co.  
Smith, T. H., & Co.

## COCAINE-HYDRO.

Boehringer, C. F., & Solino  
Howards & Sons  
Merck, E.

## COCA WINE

Burroughs, J., Lim.  
Evans, Lescher & Webb  
Stephen Smith & Co., Lim.  
Hull, J.  
Wilcox & Co., Lim.

## COCOA & CHOCOLAT

Cadbury Bros.  
Fry & Sons  
Van Houten  
Vi Cocoa (Lr. Tibbles)

## COD-LIVER OIL

Allen & Hanbury's  
Bass Bros. & Stevenson  
Burroughs, Wellcome & Co.  
Evans, Lescher & Webb  
Evans, Sons & Co.  
Goodall, Backhouse & Co.  
Harker, Stag & Morgan  
Kemp & Son  
Lothouse & Salmter  
Lund & Son  
Smith, T. H., & Co.  
Spratt's Patent (Drs. Cakes)  
Scott's Emulsion  
Southall Bros. & Barclay

## COLLAPSIBLE TUBES

Christy, T., & Co.  
Marshall, Lim.  
Vigo, Jules, et Cie.

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Allen & Hanbury's  
Burroughs, Wellcome & Co.  
Fletcher, F.  
Leo & Co.  
Lloyd, T. Howard, & Co.  
Manners & Co.  
Parke, Davis & Co.

## CONCENT. LIQUORS

Howards & Sons  
Lund & Son  
Robinson, B.

## CORKS

Hingroo & Cobb

## CONFECTIONERY

Guest, T., & Co.  
Hillabys, Lim.  
Kerfoot, T., & Co.

## CRUSHED LINSEED

Mumford, G. S.

## DENTIFRICES, &c.

Hovenden & Sons  
Jewsbury & Brown  
Mason, C. E., & Co.  
Stevens, P. A.  
Sutton, G. L., & Co.  
Woods, W. (Arecia Nut)

## DENTISTRY

Barker, F. H.  
Browning, A. J.  
Fentiman, A. J., & Co.  
Spencer & Son

## DISINFECTANTS

Edlow & Co.  
Calvert, F. C., & Co.  
Jussak Bros.  
Fletcher Bros. & Co.  
Hebden, W. C.  
Jal  
Kay Bros., Lim.  
Mackey, Mackey & Co.  
Major & Co., Lim.  
May & Baker, Lim.  
May, Geo., & Co.  
Sanitas Co., Lim.  
Steele, J. C., & Co.  
Toni Hassan & Hayward  
Tyler, T., & Co., Lim.

## DOG MEDICINES, &c.

Spratt's Patent, Lim.

## DRUGGISTS' SUNDRIES

Ayrton & Saunders  
Barclay & Sons, Lim.  
Bleasdale & Co., Lim.  
Burge, Warren & Ridley  
Dunlop & Wilmsen  
Jenoual, J., & Co.  
Evans, Lescher & Webb  
Evans, Sons & Co. (Savars)  
Fassett & Johnson  
Fordham, W. B., & Sons, Lim.  
Gilbertson, H., & Sons, Lim.  
Hovenden & Sons  
Kay Bros., Lim.  
Kelp & Co.  
Marshall, Lim.  
Maw, S., Son & Thompson  
May, Roberts & Co.  
Newbery, F., & Sons  
Parke, J., & Co.  
Quelch, H. C.  
Roberts & Sheppey  
Sanger & Sons  
Schulze & Co.  
Shirley Bros.  
Solport Bros.  
Southall, H., & Barclay  
Tidman & Son  
Toogood, W.  
Wood, Vincent  
Woolf, F.

## DRUG GRINDERS

Allen, S., & Sons

## DRUGS

Bass Bros. & Stevenson  
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Lothouse & Salmter  
Merck, E.  
Oppenheimer, Son & Co.  
Wiley, S., Lim.

## DYES

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Farina, J. M.  
Sainsbury, S.  
Van Oppen & Co.

## EMBROCATION

Day & Sons  
Hillman, Sons & Co.  
Harvey & Co.  
Holloway, T., & Co.  
Post, A. M., Lim.  
Sanitas Co., Lim.

## ENEMAS

Barclay & Sons, Lim.  
Evans, Sons & Co.  
Lynch & Co., Lim.  
Nextery, F., & Sons  
Sanger & Son  
Wood, Vincent  
Woolley, J., Sons & Co., Lim.

## ESSENCES

Allen & Hanbury, Lim.  
Barnett & Foster  
Burgoyne, Burbridge & Co.  
Bush, W. J., & Co., Lim.  
Fletcher, Fletcher & Co.  
Goodall, Backhouse & Co.  
Hay, Wm., Lim.  
May & Baker, Lim.  
Newhall & Mason  
Stevenson & H. well  
Woolley, J., Sons & Co., Lim.

## ETHER

Howards & Sons  
Macfarlan, J. F., & Co.  
Manners & Co.  
Tyler, T., & Co.  
White, A., & Sons

## ESSENTIAL OILS

Allen, S., & Sons  
Bass Bros. & Stevenson  
Barnett & Foster  
Bush, W. J., & Co.  
Corio, F. A.  
Evans, Sons & Co.  
Hornet & Sons  
Jeancaud, Gagan & Benjamin  
London Essence Co.  
May & Baker, Lim.  
Poppelreuter, W.  
Quelch, H. C.  
Ransom, Wm., & Sons  
Raynaud, Claude, & Co.  
Sanitas Co., Lim.  
Sozio & Andrioli  
Stevenson & Howell  
Warrick Bros.  
Wilkinson & Simpson, Lim.

## EUCALYPTUS OIL

Sanitas Co., Lim.  
Sharland & Co.  
Tasmanian Eucalyptus Oil Co.

## EXTRACT MEAT

Armour & Co.  
Brand & Co.  
Liebig Co.  
Nelson, G., Dale & Co., Lim.

## EXTRACTS, FLUID

Allen & Hanbury's  
Allen, S., & Co.  
Bleasdale & Co., Lim.  
Burgoyne, Burbridge & Co.  
Evans, Sons & Co.  
Fletcher, Fletcher & Co.  
Hearon, Squire & Francis  
Lloyd, T. Howard, & Co.  
Merck, E.  
Parke, Davis & Co.  
Potter & Clarke  
Ransom, W., & Son

## EXTRACTS, SOLID

Allen, G., & Co.  
Nelson, G., Dale & Co., Lim.  
Ransom, W., & Son

## FEEDING BOTTLES

Allen & Sons, Lim.  
Evans, Sons & Co.  
Gilbertson, H., & Sons, Lim.  
Hovenden & Sons  
Kilner Bros.  
Lynch & Co., Lim.  
Maw, S., Son & Thompson  
May, Roberts & Co.  
Youldon, E.

## FILTERS

Berkfeld Filter Co., Lim.  
Detrius, J., & Sons

## FLY CATCHERS

Alabastine Co. (British), Lim.  
Chameleon Patents Mfg. Co., Lim.  
Ford Shapland & Co.  
Godson, Lim.  
Kay Bros.  
Marshall, Lim.  
Mather, W., Lim.  
Maw, S., Son & Thompson  
Newbery, F., & Sons  
Shirley Bros.  
Smith, J. H., & Co.  
Strout, Christy  
Tunbridge & Wright  
Western Pharmacies Co.

## FOOD (Infants' & Invalids)

Allen & Hanbury's  
Beanes, E., & Co.  
Benger's Food  
Bleasdale & Co., Lim.  
Bovril, Lim.  
Brand & Co.  
British Santose Co., Lim.  
Burgoyne, Burbridge & Co.  
Coombs' Flour Co., Lim.  
Cosenza & Co.  
Ferecol, "Santose"  
Frame Food Co.  
Goodall, Backhouse & Co.  
Hearon, Squire & Francis  
King, G., & Co.  
Liebig Co.  
Nelson, G., Dale & Co., Lim.  
Nestle, H.  
Parke, Davis & Co.  
Ransom Syndicate, Lim.  
Ridge, J.  
Savory & Moore  
Squire's Chemical Food  
Vi-Cocoa (Dr. Tibbles)  
Virol Bovril, Lim.  
Worth's Foods Syndicate, Lim.

## FRUIT SALT

Eno, J. C., Lim.

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Fink, F., & Co.  
Maggett, Saml., & Sons, Lim.

## GLYCERIN

Price's Candle Co., Lim.

## GRANULAR PREP.

Howards & Sons  
F. and G. Ltd.  
Evans, Sons & Co.  
Hearon, Squire & Francis  
Lloyd, T. Howard, & Co.  
Lothouse & Salmter  
Tyler, T., & Co., Lim.

## HAIR PREP.

Alexandre, L.  
Chesbrough Co.  
Edwards & Co.  
Hopgood, W.  
Mazon, James & Co.  
Rayne, H. & M.  
Thiellay, E. H.

## HERB BEER EXTS.

Newhall & Mason  
Potter & Clarke

## HOMOEOPATHIC

Ashton & Parsons  
Epps, J., & Co., Lim.  
Keene & Ashwell (Perloids)  
Leath & Ross  
Watson & Wates

## HYPOPHOSPHITES

Duncan, Flockhart & Co.  
Fellows  
Fletcher, Fletcher & Co.  
Tyler, T., & Co., Lim.

## INHALERS

Hawksley, T. (AmCh)  
Krohn & Seemann  
Kuhn, L.  
Lynch & Co., Lim.  
Newschome, G. T. W.

## INSECTICIDES

Antikito Toilet Co.  
Bleasdale, Lim.  
Fleming's Oil & Chemical Co., Lim.  
Jackson, T.  
Tunbridge & Wright  
Windschugel, C., & Co.

## LAVERNER WATER

Newbery, F., & Sons, Berdoo & Sainsbury, S.

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Southwell, C., & Co.  
Toomey, J.

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Burgoyne, Burbridge & Co.  
Christy, T., & Co.  
Darton, Gibbs & Co.  
Liverpool Lint Co.  
Maw, S., Son & Thompson  
Newsome, C.  
Robinson & Sons  
Wood, Vincent

## LIQUORICE

Evans, Gray & Hood ("Solazzi")  
Evans, Sons & Co. (Savaria)  
Hillabys, Lim.  
Jeancaud, Gagan & Benjamin  
Wilkinson & Co.  
Young & Smylie

## LIQUORS

Bass Bros. & Stevenson  
Fletcher, Fletcher & Co.  
Lloyd, T. Howard, & Co.  
Oppenheimer, Son & Co., Lim.

## LOOFAHS

Solport Bros.

## LOTIONS

Edgar's Croup Lotion

## LOZENGES, &c.

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Denoual, J., & Co.  
Gibson, R., & Sons (Manfra)  
Guest, T., & Co., Lim.  
Jackson, T.  
Kerfoot, T., & Co.  
Raines & Co.  
Warrick Bros.

## LUNG PRESERVERS

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Colton, Arthur  
Gardner, W., & Sons  
Nell, C.  
Pindar, J. W.  
Werner, Plederer & Perkins, Lim.

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American Magnesia Co.  
Bishop, A., & Sons, Lim.  
Bleasdale, W., & Co.  
Henry, T. H., & W. (Calined)  
Lloyd, T. Howard, & Co.  
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Parke, Davis & Co.  
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Raines & Co.  
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Stern Bros. (White)

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Burroughs, Wellcome & Co.  
(Lanoline)  
Chesbrough Co. (Vaseline)  
Lloyd, T. Howard, & Co.  
Resinol Chemical Co.

**OXIDE OF ZINC**

Baiss Bros. & Stevenson  
Hubbuck, T., & Son, Lim.

**PALATINOIDS**

Oppenheimer, Son & Co., Lim.

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Robbins & Co.  
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Clarke's Blood Mixture  
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Edgar's Croup Lotion  
Edwards & Son  
Evans, Lescher & Webb  
Evans, Sons & Co.  
Fanning (Powders)  
Goddall, Backhouse & Co.  
Holloway (Pills and Oint.)  
Hovenden & Sons  
Lugeman, C.  
Lulor, Phosphodyne, &c.)  
May, Roberts & Co.  
Newbery, F., & Sons  
Paris Medicine Co.  
Post, A. M., Lim.  
Richards, J. M.  
White, A. J., Lim.

**PEPPERMIT OILS**

Bush, W. J., & Co.  
Ransom, W., & Son  
Stevenson & Howell

**PERFUMERY****FANCY SOAPS**

Allen & Hanburys, Lim.  
Avrton & Saunders  
Baker & Co.  
Barclay & Sons, Lim.  
Bleasdale, Lim.  
Blondeau & Cie  
Burgoyne, Burdidge & Co.  
Bush, W. J., & Co.  
Chesbrough Co.  
Cook, E., & Co., Lim.  
Corbyn, Stacey & Co.  
Evans, Sons & Co.  
Farina, J. M.  
Greensill & Son  
Hovenden & Sons  
Jeancaud, Gazin & Dozma  
London Essence Co.  
Marshall, L. M.  
Mason, C. E., & Co.  
Mulhens, F.  
Newbery, F., & Sons (St. Paul's)  
Parke, J., & Co.  
Pears, A. & F. Lim.  
Potter & Clarke (Sachets)  
Quelch, H. C.  
Raynaud, Claude, & Co.  
Roberts & Sheppey  
Sainsbury, S.  
Sanger, J., & Sons  
Schutze, F., & Co.  
Spurway et Cie  
Van Oppen & Co.  
Vigo, Jules & Co., Lim.  
West, T. (Ockell's Mona)

**PESSARIES**

Rendell, J. W.

**PTREUM JELLY, &c.**

Allen & Hanburys  
Christy, T., & Co.  
Dee Oil Co., Lim.  
Hatrick, James L., & Co.  
Snowdon, Sons, & Co., Ltd. (Jelly)  
Stern Bros.

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Arimour & Co.  
Baiss Bros. & Stevenson  
Barron, Harveys & Co.  
Boehring, C. F., & Sohn  
British Smatose Co., Lim.  
Burgoyne, Burdidge & Co.  
Burroughs, Wellcome & Co.  
Davies, Gibbins & Co.  
Duncan, Floekhart & Co.  
Evans, Gadd & Co.  
Evans, Lescher & Webb  
Evans, Sons & Co.  
Fairchild Bros. & Foster  
Fassett & Johnson  
Ferris & Co.  
Fletcher, Fletcher & Co.  
Heaton, Squire & Francis  
Hewlett & Son  
Howards & Sons  
Kellogg Co.  
Kirby, H. & T., & Co., Lim.  
Lageman, C.  
Lambert, Phare & Co.  
Lofthouse & Saltmer  
Macfarlan, J. F., & Co.  
Mackey, Mackey & Co.  
Mann, C. A. Hopkinson  
Martindale, W.  
May & Baker, Lim.  
Merck, E.  
Merrell, Wm. S., Chemical Co.  
Oppenheimer, Son & Co.  
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(Continued on next page.)

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*Winter Issue*

OF

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On the opposite page will be found the names of Firms who have entrusted us with the circulation of their Price Lists, &c., with this issue.

Many of these Insets are repeats, thus proving that satisfactory results have been previously received.

The Circulars thus distributed reach the best buyers in the British Drug Trade in every part of the world, and they are preserved with care for future reference.

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The Publisher will give to applicants full particulars regarding designs and the preparation and printing of Insets, and begs to call attention to the following terms for insertion:—

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July 28, 1900,

42 CANNON STREET, LONDON, E.C., who will be happy to give further particulars if desired.



# Summer Issue Insets,

1900

	Between Pages
AERATORS (LIM.)... ..	"Sparklets" ... .. 32 and 33
ANGLO-AMERICAN OIL CO. (LIM.)... ..	"White Rose" Lamp-oil, Specimen Counter-bill ... .. 192 ,, 193
BAISS BROS. & STEVENSON... ..	Sandalwood Oil and Gelatine Capsules, Krysal, &c. ... .. 32 ,, 33
BARNETT & CO. ... ..	Illustrated Price-list of Perfumes, Facsimiles of Bottles and Packages ... .. (Loose)
BERKEFELD FILTER CO. (LIM.) ... ..	Filters ... .. 64 and 65
BRATBY & HINCHLIFFE (LIM.) ... ..	Facsimile in Colours of the "Orient" Soda water Machine ... .. 64 ,, 65
BRUNNER, MOND & CO. (LIM.) ... ..	Mineral-water Bicarbonate ... .. 64 ,, 65
BURROUGHS, J. (LIM.) ... ..	S.V.R. and S.V.M., Wines, Spirits, &c... .. 192 ,, 193
CHRISTY, T., & CO. ... ..	Christia, Shop-labels, Evergreen Colours, Ethyl Chloride, Collapsible Tubes, Cachets, Koscals, Adeps Lanae ... .. 160 ,, 161
COX, A. H., & CO. ... ..	Price-list of Tasteless Pills and Packed Proprietary Pills ... .. 160 ,, 161
CUXSON, GERRARD & CO. ... ..	"Red Cross" Specialities ... .. 160 ,, 161
DARTON, F., & CO. ... ..	Photographic Goods, Spectacles, Thermometers, &c... .. 160 ,, 161
DEFRIES, J., & SONS (LIM.) ... ..	Pasteur (Chamberland) Filter ... .. 32 ,, 33
DOMEN BELTS CO. ... ..	"Domen" Belts and Surgical Apparatus ... .. 64 ,, 65
FLETCHER, FLETCHER & CO. (LIM.) ... ..	"Vibrona" Art Series of Pictures ... .. 32 ,, 33
FOSTER, G., CLARK & CO. ... ..	"Eiffel Tower" Lemonade ... .. 32 ,, 33
FRAME FOOD CO. (LIM.) ... ..	Frame Food, Booklet for Counter Distribution ... .. 32 ,, 33
FRITSCHKE, FRANZ & CO. ... ..	Essential Oils... .. 192 ,, 193
GIBBS, D. & W. (LIM.) ... ..	Toilet-soaps, &c., Facsimile of Handbill for Counter Distribution ... .. 32 ,, 33
GIBSON, R., & SONS (LIM.) ... ..	Facsimile in Colours of Tins of Chocolate Worm-cakes, Cough-pastilles, &c. ... .. 64 ,, 65
HEARON, SQUIRE & FRANCIS (LIM.) ... ..	History of Firm from the Year 1714 ... .. (Loose)
KAHNEMANN & KRAUSE ... ..	Cachets "Kahnemann" and Tablet-compressor, Printed with Gold on Gelatine... .. 64 and 65
McKESSON & ROBBINS ... ..	Price-list of Pills ... .. 160 ,, 161
MARSHALLS (LIM.) ... ..	Price-list of Druggists' Sundries, Collapsible Tubes, &c. ... .. (Loose)
MERCK, E. ... ..	Price-list of Chemicals, &c. ... .. (Loose)
NEWBALL & MASON ... ..	Extract of Herbs ... .. 64 and 65
FEARS, A. & F. (LIM.) ... ..	Pears' Soap ... .. 32 ,, 33
POULTON & NOEL ... ..	Wholesale Price-list, Specialities for Invalids ... .. 192 ,, 193
ROYAL STANDARD WINE CO. ... ..	Price-list of Wines, &c. ... .. 32 ,, 33
SAXLEHNER, A. ... ..	Hunyadi János ... .. 32 ,, 33
SPOTTISWOODE & CO. ... ..	Printing, Lithography, &c. ... .. 32 ,, 33
SPRATT'S PATENT (LIM.) ... ..	Views and Particulars of New Offices and Warehouses. Canine Specialities ... .. 32 ,, 33
STANDARD OPTICAL CO. ... ..	Spectacles, Eyeglasses, &c... .. 160 ,, 161
TOMLINSON & HAYWARD ... ..	Yellow "Paste" Dip, Dairy-helps ... .. 64 ,, 65
TOWNSEND, J., & SON ... ..	Chemists' Printing, Labels, &c. ... .. 32 ,, 33
TYLER, C., & ENGLAND BROS. (LIM.) ... ..	Photographic Mounts and Specialities ... .. 160 ,, 161
WARNER, W. R., & CO. ... ..	Price-list of Pills and Pharmaceutical Preparations ... .. (Loose)
WRIGHT, LAYMAN & UMNEY (LIM.) ... ..	Wholesale Druggists. Illustrated Description of their Manufacturing Premises ... .. 160 and 161
YOUNG & SMYLIE ... ..	"Acme" Liquorice Pellets... .. 64 ,, 65

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# CONTENTS.

	PAGE
TESTIMONIALS . . . . .	2
SUPPORT WITHOUT PRESSURE . . . . .	3
INSTRUCTIONS FOR MEASURING . . . . .	4
INSTRUCTIONS FOR WEARING . . . . .	5
“DOMEN” ABDOMINAL BELT SUPPORTS:—	
PREGNANCY BELT . . . . . System I.	6
ACCOUCHEMENT BELT . . . . . „ II.	7
HYPOGASTRIC BELT . . . . . „ III.	8
BELT WITH SPINAL ATTACHMENTS . . . . . „ IV.	9
UMBILICAL HERNIA BELT . . . . . „ V.	10
FLOATING KIDNEY BELT . . . . . „ VI.	11
“DOMEN” ABDOMINAL BELT BANDAGES . . . . .	12-15
“DOMEN” CHOLERA BELT . . . . .	16
“DOMEN” PREGNANCY CORSETS . . . . .	17
“DOMEN” BELT CORSETS . . . . .	18, 19
“DOMEN” “STOOP-CURE” . . . . .	20, 21
“DOMEN” MEN’S BODY BELTS . . . . .	22, 23
“DOMEN” ELASTIC HOSIERY, STOCKINGS, &c. . . . .	24, 25
“DOMEN” OCCASIONAL BELT . . . . .	26

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A number of the Leading Hospitals, among which are  
The London Hospital,  
The Westminster Hospital,  
The University College Hospital,  
The St. Saviour's Hospital,  
The Charing Cross Hospital,  
The East London Hospital,  
Great Northern Central Hospital,  
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CHEQUES TO BE MADE PAYABLE TO  
**"DOMEN" BELTS CO.,**  
Crossed LONDON & WESTMINSTER BANK, WEST END OFFICE.



# SUPPORT WITHOUT PRESSURE,

FOR

PREGNANCY, ACCOUCHEMENT, CORPULENCY, &c.

---

THE "DOMEN" ABDOMINAL BELTS are a scientific improvement on the old-standing idea that the same belt will do for a number of greatly varying conditions. The whole subject of Abdominal Belts has now been carefully thought out, and every improvement that thorough anatomical knowledge and mechanical science can suggest has been adopted. Each special want or complaint has been provided with the appliance peculiarly suited to it, with the most beneficial and satisfactory results.

The "DOMEN" ABDOMINAL BELTS fit well, sit comfortably, and *do not get out of place*. They are made in six different forms, giving great comfort and relief in abdominal complaints, lessening the burden of pregnancy and the risk of miscarriage, and promoting a safe and easy delivery.

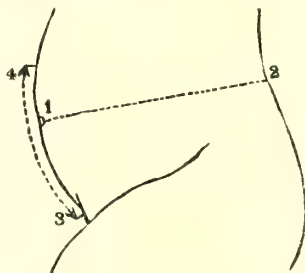
Such skilled and minute consideration of the special belts required for different complaints has never before been placed at the disposal of Medical Men and their Patients in this country; and it is only necessary to examine the contents of this Catalogue to recognise the vast number of cases in which a Security, Relief, and Comfort hitherto unattainable can now be **immediately** and **cheaply** afforded.

## INSTRUCTIONS FOR MEASUREMENT, ETC.

**How to Measure:**

The measurement should be taken over the skin, and, as indicated in the drawing, *round the line of greatest dilatation of abdomen (line 1-2), not round the waist*; this is quite sufficient.

It is essential that the measurement is taken quite round the abdomen.

**How to Order:**

If the measurement of the body consists of an uneven number of inches, deduct 3 inches; if of an even number, deduct 4 inches, to arrive at the proper size of Belt; because the ends of the Belt should not meet, but should allow sufficient room for expansion of the elastic and contraction of the body. Examples: If measurement be 33 ins., order a 30 ins. Belt. If measurement be 38 ins., order a 34 ins. Belt.

## ALWAYS STATE WHEN ORDERING IF DEDUCTIONS HAVE BEEN MADE.

**Stock Sizes:**

All Belts catalogued are kept in sizes 28 ins. to 44 ins., unless otherwise stated.

**Extra Charges:**

All Belts described on pages 6 to 11, and all Belt Bandages and Body Belts, when over 40 inches in size, are subject to an extra charge, according to the following scale:—

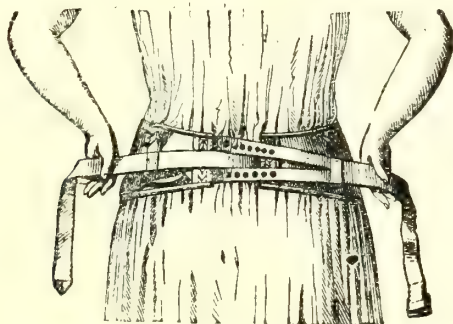
42	44	46	48	50 inches.
1/-	2/-	3/-	4/-	5/-

**Special Orders not returnable:**

These, in addition to size of circumference, should carefully state depth in front as well as any abnormal requirements. From eight to ten days are required for making Belts to special order, and an extra charge of 10 per cent on the ordinary price is made. Belt Corsets to special order are also charge 10 per cent. extra when further measurements are stated beyond size of waist.



## HOW THE BELT SUPPORT SHOULD BE WORN.



*These Instructions are important, and should be carefully followed.*

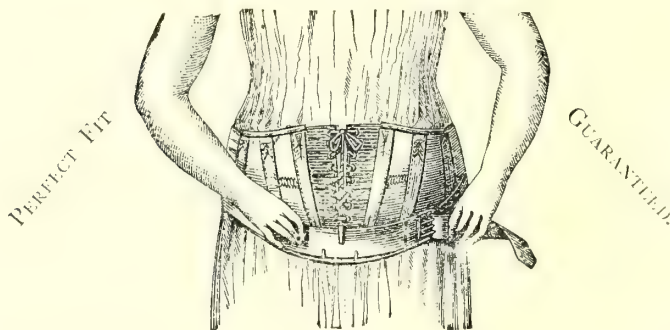
When the Belt is applied as shown in the illustration, the bands are equally drawn until the Belt fits well to the body. The portion of the band which is perforated and eyeleted is then fastened to the corresponding button or hook at the back. Care should be taken to draw the Belt as low down in front as possible, as this is where the support is most needed. When this is done, the elastic side straps are fastened on the buttons at either side, so as to give support from below. Having completely adjusted the Belt, the main band is passed under the hook in front, and is buckled or otherwise fastened according to the style of Belt. **The lacing in front is in all cases tightened last, and should be loosened before putting on the Support.**

*N.B.*—The ends of the Belt at the back should not meet, but be about four inches apart (for reasons see page 4). The Belt may be worn under or over the chemise, or over the drawers. In the two latter cases the chemise must sit loosely above the Belt, as otherwise the movements of the body may draw up the Belt and thus cause discomfort.

## 6 Support without Pressure, "DOMEN" ABDOMINAL BELTS.

### PREGNANCY BELT,

NOT TO BE WORN AFTER CONFINEMENT.



#### SYSTEM I.

Renders very effective service in Pregnancy, by greatly diminishing the suffering and burden usually entailed; much reduces the dangers attending delivery: the best preventive of premature confinement; affords instant relief in derangements of the womb, especially in prolapsus (falling of the womb), anteversion, and antelexion. *The abdomen is literally carried*, and the muscles relieved from all excessive strain by the non-yielding material at the hips, and by the strong, broad band, which is kept in position by hooks as shown, and supports the lowest point of the body. The elastic front allows easy expansion where it is needed and *prevents undue pressure*. Prices for the various qualities, in all sizes up to 40 inches, are:—

A	W	E	J
Lavender Grey Jean.	Superior White Coutille.	White Horsehair (Summer).	Pure Wool, Natural Colour Lasting.
16/6	18/6	21/-	23/6

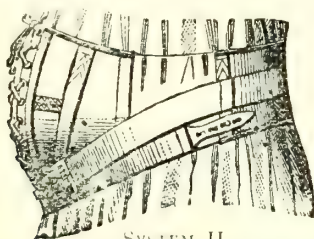
"Obstetric Binders," for use immediately after delivery, 7/6 and 10/6.

NOTE.—Instructions for measuring and extra charges for sizes over 40 inches are given on page 4.



## ACCOCHEMENT AND CORPULENCY BELT

RESTORES FORMER SHAPELINESS.



SYSTEM II.

Pre-eminently useful after confinement, affording the most effectual support to the internal organs, preventing pressure on the fundus of the womb, and protecting against the numerous diseases and deformities which may occur from want of due precaution at these critical stages. The elastic sides of this Belt, combined with the non-yielding front, reduce the abdomen to its original size and shapeliness; convalescence is thereby greatly accelerated, and weakness of the abdominal walls prevented.

System II. is also particularly serviceable in cases of corpulence or weakness of the abdominal regions for both **LADIES and GENTLEMEN**; its beneficial action will be most felt in *walking, riding, or during any active exercise.*

Prices for the various qualities, in all sizes up to 40 inches, are:—

A	W	E	J
Lavender Grey Jean.	Superior White Coutille.	White Horsehair.	Pure Wool. Natural Colour L. string.
16/6	18/6	21/—	23 6

*In A & J Quality this System is stocked in all sizes from 24 inches to 50 inches in circumference.*

FIG. A.



### AFTER OPERATION OF LAPAROTOMY.

After operation of Laparotomy this is the most efficient Belt that can be used, giving, when fitted with the velvet-covered pad, Fig A, firm support to the weakened wall over and around the cicatrix. The pad is sewn fast in the required position on the inner side of the Belt. **Price 3/9.**

NOTE — Instructions for measuring and extra charges for sizes over 40 inches are given on page 4.

# 8 Support without Pressure, "DOMEN" ABDOMINAL BELTS.

## HYPOGASTRIC BELT.

FOR CORPULENCY AND GENERAL SUPPORT.

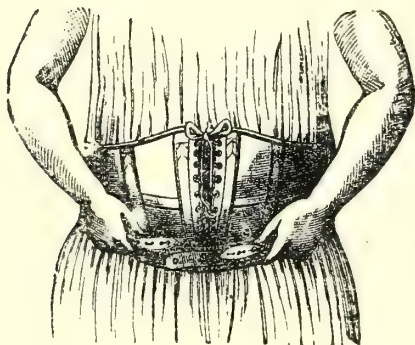
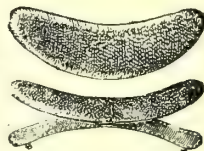


FIG. 2.



### SYSTEM III.

This belt should be employed in cases of extreme corpulency and of pendulous abdomen, when it will be found unsurpassed in point of efficiency and comfort. Its action is most beneficial when the womb is pressed up against the bladder, as also in the pains which so frequently make themselves felt in the hips, loins, and sides.

A peculiarly constructed flexible steel spring (Fig. 2), with a well-cushioned pad, maintains an equable and gentle pressure immediately above the pubes.

Prices, in all sizes up to 40 inches, are :—

Qualities kept in Stock.	A	E	J
	Lavender Grey Jean.	White Horsehair (Summer).	Pure Wool Natural Lasting.
	22/6	25/6	27/6

*In A Quality this System is stocked from 28 inches to 46 inches.*

NOTE.—Instructions for measuring and extra charges for sizes over 40 inches are given on page 4.



## ABDOMINAL SUPPORT WITH SPINAL SPRINGS.

FIG. 1.

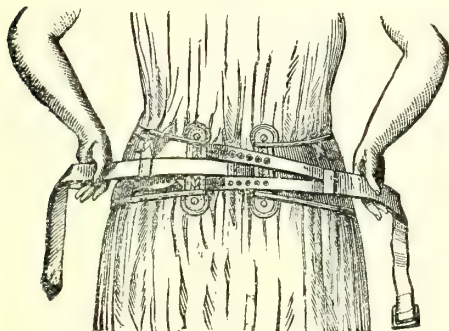
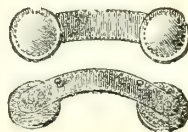


FIG. 2.



### SYSTEM IV.

The special construction of this Support is peculiarly adapted for relieving pains in the back and disorders caused by weakness of the spine.

Attached to the ends of this Support are two covered flexible steel springs (Fig. 2), the ends of which are furnished with well-cushioned pads, which act as comfortable and powerful stays to the spine.

In the case of an obese person with pendulous abdomen, the padded springs prevent the Support from cutting into the body and from pressing upon the spine.

Spinal springs, as illustrated in Fig. 2, can be attached to any of the Belts described on pages 6 to 11, and can be had separately. 4/- per pair.

System IV. Belts are supplied in all qualities in which System II. Belts are kept (see page 7).

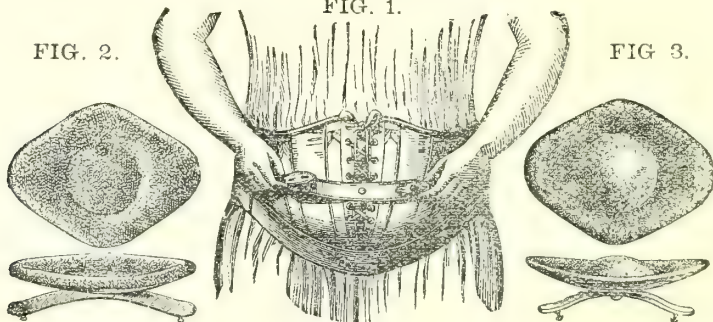
NOTE.—Instructions for measuring and extra charges for sizes over 40 inches are given on page 4.

## UMBILICAL HERNIA.

FIG. 1.

FIG. 2.

FIG. 3.



### SYSTEM V.

This Support (Fig. 1) is the best appliance for Umbilical Hernia. In the case of an obese person with pendulous abdomen suffering from Umbilical Hernia, and especially with women past middle age, who have borne large families, the abdomen, from its relaxed condition, has a tendency to push an Umbilical Spring Truss out of position. In such instances the excellent shape and construction of this Belt maintain it in position, affording an exceedingly comfortable stay to the abdomen and the internal abdominal organs, without requiring it to be drawn too tight.

All Belts of this System are fitted with velvet-covered oval-shaped concave pads (Fig. 2).

A similar pad with apex centre (Fig. 3) may be had instead. This should, however, only be used **under medical authority**.

Prices, in all sizes up to 40 inches, are:—

Qualities	A	E **	J
	Lavender Grey Jean.	White Horsehair (Summer).	Pure Wool Natural Lasting.
kept in Stock.	22/6	27/6	30/-

*Stocked in sizes 28 inches to 50 inches in A & J Quality.*

A special Belt for the above complaint has been designed for Men's use, which, however, is not intended for support to the abdomen, but merely for the hernia. Shape as Belt design, page 16, to buckle at back, with velvet-covered oval-shaped concave pad in centre. Made to order only. Price, Quality A, 15/-; Quality J, 21/-

NOTE.—Instructions for measuring and extra charges for sizes over 40 inches are given on page 4.

\*\* This quality is not kept in Stock, but will be delivered in eight to ten days from receipt of order.



## FOR FLOATING KIDNEY.

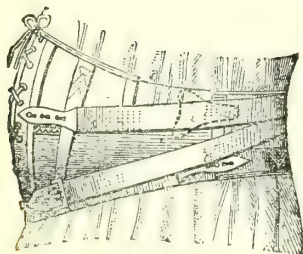


FIG. 1.

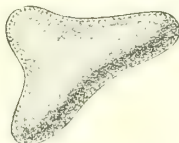


FIG. 2.

### SYSTEM VI.

Especially constructed for Displacement of the Kidneys, which it retains in their natural position, without injury or troublesome pressure, and with immediate cessation of pain. In ordering this Support, information should be given as to whether the displacement is on the right or the left, or on both sides. For the latter an extra charge of 4s. will be made.

When the Support is completely adjusted, except the tightening of the facing in front, insert the pad (Fig. 2), as indicated in illustration, between the lowest rib and the hip-bone; then lace up and button the band fitted at the side, so as to cross the pad and keep it in position. In addition to this, the pad may be fastened with a safety-pin from the outside. Prices in all qualities up to 40 inches are:—

Qualities	A	E**	J
kept in Stock.	Lavender Grey Jean.	White Horsehair (Summer).	Pure Wool Natural Lasting.
	21/-	25/-	28/6

A & J Quality stocked in sizes 24 ins. to 34 ins.

\*\* This quality is not kept in Stock, but will be delivered in eight to ten days from receipt of order.

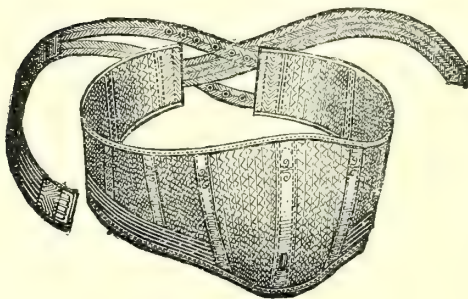
NOTE.—Instructions for measuring and extra charges for sizes over 40 inches are given on page 4.

## "DOMEN" ABDOMINAL BELT BANDAGES.

The following Bandages have been designed to supply the want of a well-constructed and comfortably sitting Belt for GENERAL use.

The selection of designs and the various styles of execution will suit every requirement and taste.

The Abdominal Bandages are somewhat lower in price than the Abdominal Belt Supports; they are **not** intended for cases where **special complaints** have to be dealt with.



Design No. 40b.

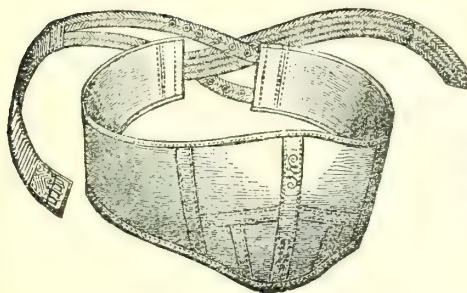
PURE WOOL.

Natural colour, strong Stockinet (a very soft and pliable material, pervious to heat and perspiration), with Elastic Binding, Elastic Bands with Buttons and Eyelet Holes at back, to buckle in front, Watch-spring Steels as shown.

Price 16/6.

For all sizes up to 40 in.; for extra charges see page 4.

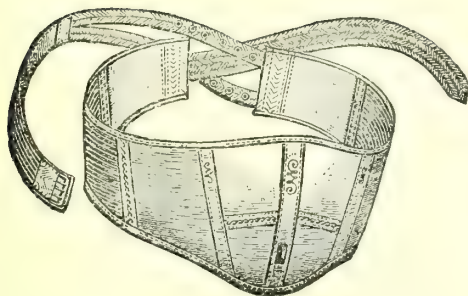




Design No. 21.

Grey Lasting, Elastic Bands and Watch-spring Steels as indicated, with Buttons and Eyelet Holes at back, to buckle in front.

Price 5/6.

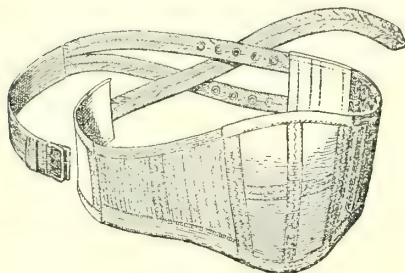


Design No. 26.

Grey Lasting, Elastic Insertions at sides, Elastic bands with Buttons and Eyelet Holes at back, to buckle in front, Watch-spring Steels, as in No. 21.

Price 8/6.

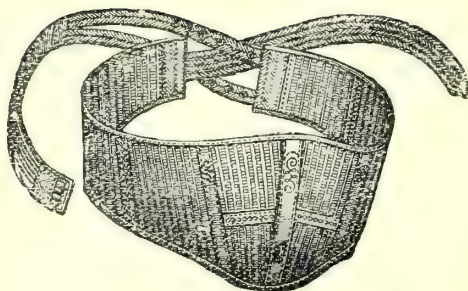
For extra charges for sizes over 40 inches see page 4.



Design No. 50A.

**Cream Colour,** strong Stockinet, with Elastic Binding, Lasting Insertions at front and back. Elastic Bands with Buttons and Eyelet Holes at back, to buckle in front. Watch-spring Steels as shown.

**Price 8/6.**



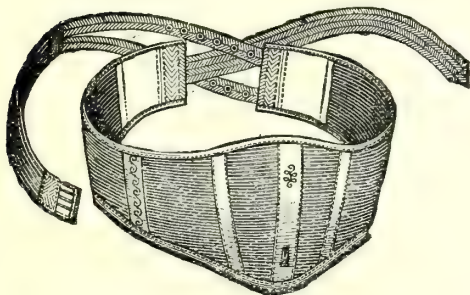
Design No. 55B

**White Horsehair Netting** (a cool material, for wear in summer and in warm climates), trimmed with Pure Wool, Elastic Bands with Buttons and Eyelet Holes at back, to buckle in front.

**Price 10/6.**

For all sizes up to 40 in. ; for extra charges see page 4.





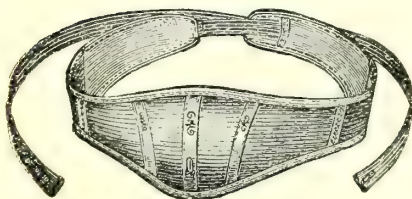
Design No. 61.

Woven Cotton Elastic, grey, with Elastic Binding, Elastic Bands with Buttons and Eyelet Holes at back, to Luckle in front.

Price 12/6.

Very strong, and well adapted for heavy exercise, riding, etc.

For Evening Wear.



Design No. 62½.

Elastic Web with Silk (white, pink, cardinal, or blue), same as No. 61, but of shallow depth in front, for wear below corset, and to brace up abdomen.

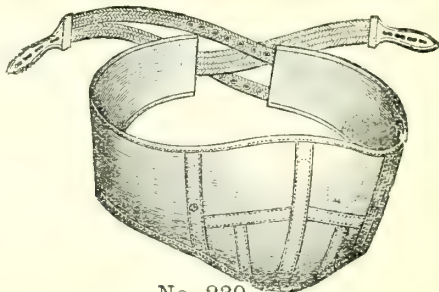
Price 14/6.

For extra charges for sizes over 40 inches see page 4.

## "DOMEN" CHOLERA BELT.

For Protection against Chill, and to maintain warmth over the Abdomen.

N.B.—This Belt is only Stocked up to 40 inches.

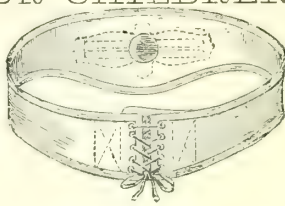


No. 230.

Grey Flannel, with Buttons, and Eyelet Holes at back. The leather ends of the bands button to the sides of the belt.

Price ... 3/9.

## "DOMEN" UMBILICAL BANDAGES. FOR CHILDREN.



Measurement required :—Circumference of the Patient's body at the Navel

In these bandages the elastic insertions, which easily become spoiled, are superseded by the use of japanned steel watch-springs, ensuring an agreeable and elastic adaptation of the bandage to the body of the wearer, preventing irritation and chafing even to the most sensitive skin, and, at the same time, making a displacement absolutely impossible. These bandages meet every requirement in the most simple and practical manner.

Price ... 3/6 each.

Stocked in sizes 10 to 20 inches.



## THE "DOMEN" PREGNANCY CORSET

counteracts the injurious tendency of ordinary Corsets to press down the internal organs.



As will be seen by the illustration, the front part below the waist is made entirely of elastic material, which allows easy expansion where it is needed and prevents undue pressure. Elastic bands pass under the hooks in front where they are buckled, and thus give support from below. These Corsets are adapted for nursing purposes.

The "DOMEN"  
PREGNANCY CORSET  
maintains elegance of figure, and gives comfortable support, while avoiding undue pressure.

Made in following materials :—  
W.—White Coutille, silk elastic.

Price 22/6.

J.—Nat. Colour, Pure Wool.

Price 27/6.

**WAIST MEASUREMENT ONLY REQUIRED.**

**A GOOD FIGURE WITHOUT TIGHT LACING.**

---

Ladies who desire a shapely figure without tight lacing, will appreciate the great advantages of the **"DOMEN" BELT CORSET**, made on a new principle.

No thoroughly practical substitute for separate corset and abdominal Belt has ever before been designed, uniting the maximum of support and comfort with perfect elegance and shapeliness. The **"DOMEN" BELT CORSET** is an actual combination of a Corset with a Belt, and has all the advantages of each without the inconvenience entailed when the separate articles are worn.

The **"DOMEN" BELT CORSET** possesses the great superiority over the ordinary simple Corset, that it prevents the down pressure on the internal organs, which even moderately tight lacing involves; while it gives efficient and valuable support both to the spine and to the abdomen.

The principle is highly approved by the Medical Profession, who see in it the most practical remedy for tight lacing ever devised.

The **BELT** as shown in the illustration is of firm construction in front, but has elastic sides over the hips, which not only provide sufficient elasticity, but also ensure perfect adaptation to the figure.

The main bands of the Belt cross at the back in a similar manner to that described and illustrated on page 5, and being fastened by eyelet holes, are passed round the body, under the hooks in front, and are buckled to the required tightness.

The **CORSET** has a narrow elastic insertion at each side under the arms, which ensures perfect freedom to the respiratory organs, and thus to a great extent minimises the possibility of too tight lacing with its injurious results.





The "DOMEN"  
BELT-CORSETS  
are made in the  
following  
materials:—

M.—Grey Coutille,  
17.6.

W.—White  
Coutille,  
18.6.



E.—White  
Horsehair,  
(Made to order only.)  
22.6.

D.—Black  
"Diamond Drill"  
Speciality,  
25/-.

J.—Nat. Colour,  
Pure Wool,  
27.6.



WAIST-MEASUREMENT ONLY REQUIRED.

## "DOMEN" "STOOP-CURE."

*For Illustration see next page.*

**T**HIS admirable appliance is a prompt and efficient corrective of tendency to stooping, and is so fitted to the figure beneath the dress as to be wholly unobservable.

It causes no discomfort to the wearer, who soon ceases to notice its presence, except when it gives a gentle reminder on any occasion of relaxing into the stooping habit.

Extraordinarily successful results have been achieved by the "DOMEN" "STOOP-CURE," and it possesses the immense advantage that it is readily and willingly worn, being neither unsightly nor uncomfortable, and, in fact, free from every objection whatsoever.

The "Stoop-Cure" is constructed of an anatomically shaped back-piece, containing watch-spring steels running parallel with the spine, and two springs extending from the centre line to the shoulders, with straps which draw the shoulders backwards, and thus increase the size of the thoracic cavity.

The "Stoop-Cure" adapts itself to every kind of weakness of the back, and to-day holds the field as the only perfect appliance to remedy round shoulders, and to maintain and preserve a correct and elegant carriage.

The "Stoop-Cure" is made in six sizes, each of which can be readily lengthened or widened to fit the wearer perfectly.

The **only measurement required** is that of the distance between the seams of the coat—or dress sleeve, across the shoulder blades; the mainspring should be appreciably smaller than such measurement.

## "DOMEN" "SHOULDER-SHAPE."

**T**HE "DOMEN" "SHOULDER-SHAPE" consists of two springs extending from the centre line of the back to the shoulders, with straps fastening under the arms and so preventing the shoulders from dropping forward. It has been merely designed to supply the want of a cheap appliance to keep the shoulders in the right position, but it is not intended for cases where stooping has already become a habit, or when support to the spine is necessary.

	SIZES	1.	2.	3.
Price ...	...	5/-	5/3	5/9

*Measurement same as for "Stoop-Cure."*





QUAL.

**L** Leather Back,  
and  
**S** White Horse-  
hair Back.

SIZE. PRICE.

Child's ... 10/-

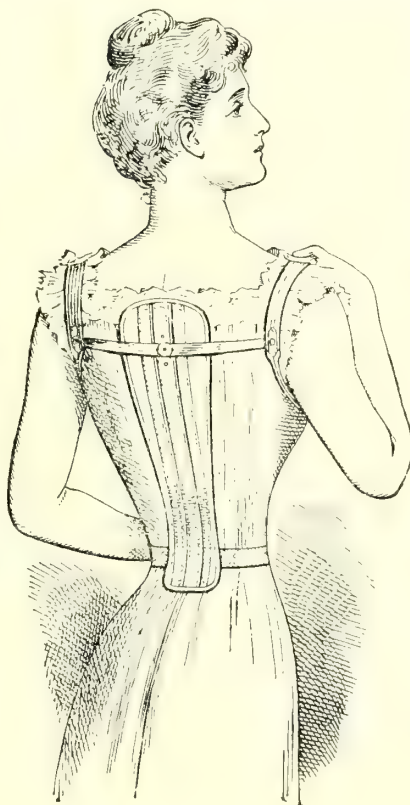
1 ... 10 9

2 ... 11 6

3 ... 12 3

4 ... 13/-

5 ... 13 9



Pure Wool.

SIZE. PRICE.

Child's ... 13/-

1 ... 13 9

2 ... 14 6

3 ... 15 3

4 ... 16 -

5 ... 16/9



*For Description see opposite page.*

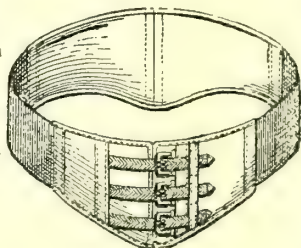
## THE "DOMEN" MEN'S BELTS

have been designed to supply the want of a well-constructed and comfortably sitting Belt for men's use. They not only give warmth to the abdominal regions, but also a support to the abdomen, which is much needed when riding, walking, or during any active exercise.

Design No. 403.

Natural colour, Pure Wool, with elastic insertions at sides. Price 7/6.

For extra charges for sizes over 40 inches see page 4.



Design No. 305.

Natural colour, Pure Wool, same shape as above, without elastic insertions at sides, to buckle in front. Price 5/6.

For extra charges for sizes over 40 inches see page 4.



## FOR WARMTH AND SUPPORT.

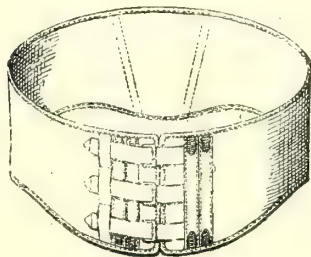
Design No. 400.

A similar Belt to the foregoing, Pure Wool Felt. Price 5/-.  
For extra charges for sizes over 40 inches see page 4.

Design No. 306.

Natural Colour, Pure Wool,  
extra deep, with strong fittings,  
shape as illustrated.

Price 10/6.



For extra charges for sizes over 40 inches, see page 4.

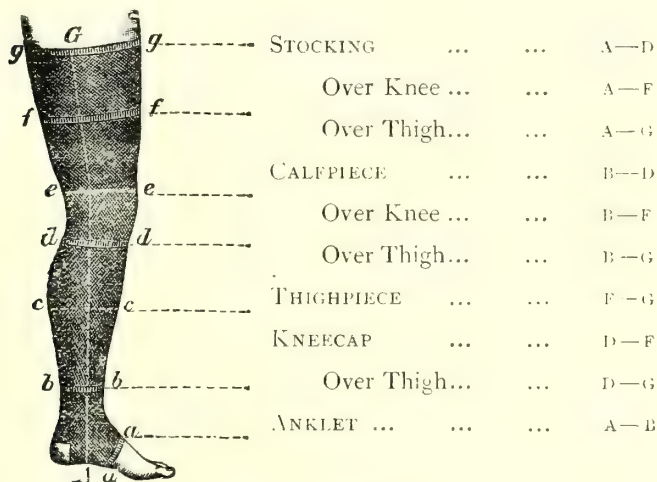
## "DOMEN" ELASTIC STOCKINGS.

			I. Superior Fine Silk Elastic.	II. Medium Quality Silk Elastic.	III. Ordinary Quality Silk Elastic.	*IV. Best Quality Cotton Elastic.
Stockings ...	... per pair		21/-	16/9	13/6	12/6
„	over knee	„	37/6	22 6	19/6	18 6
* „	„ thigh	„	52 6	32/-	28 6	27 6
Calfpiece ...	... „		15/6	12/6	9/6	3/6
* „	over knee	„	25/6	19/6	17/6	16 6
* „	„ thigh	„	45/-	32 6	25/-	24/-
*Thighpiece ...	... „		15 6	10 6	9 -	7 6
Kneecap ...	... „		14/-	10 3	8/9	8/-
* „	over thigh	„	25/6	19/6	17/6	16/6
Anklet ...	... „		14/-	10 6	8 6	7 6
*Wristlet ...	... „		5 -	4 6	3/6	3/-

*Goods made specially to order are charged 20 % extra.*

\* These Goods are not kept in Stock, and will take 5 or 6 days to deliver.





## HOW TO MEASURE.

The measurement should be taken over the skin, and in parts as indicated in drawing. As the limbs are liable to become swollen during the day it is best to measure in the morning. The exact measurement should be given, circumference and length, in inches; for stockings reaching over and below the knee, it is necessary to give the length above and below the knee separately, viz.:—For Stocking over knee give A—B—D—F.

## LADIES' SPECIALTY.

**"DOMEN" OCCASIONAL BELT.**

---

Reprinted from "Beauty's Queens."

---

"Yet another speciality is the 'OCCASIONAL BELT,' which we cannot too highly estimate for ladies' occasional wear, possessing, as it does, so many advantages over the many primitive and inefficient appliances in use. It is so constructed as to entirely remove all possible source of discomfort and risks of disease and chill, its completeness being of special advantage for travelling. Without describing its component parts, we would merely advocate its adoption, and emphasize the fact that many of the evils from which many delicate women suffer may be avoided by its use."

---

Price 3/9.



ASK FOR SPECIAL LEAFLET.









# CACHETS

# "KAHNEMANN"

AND CLOSING APPARATUS

CACHETS "KAHNEMANN" are High in Quality  
 CACHETS "KAHNEMANN" are Low in Price  
 CACHETS "KAHNEMANN" are Absolutely Pure  
 CACHETS "KAHNEMANN" are Perfectly Uniform  
 CACHETS "KAHNEMANN" are Easy of Manipulation  
 CACHETS "KAHNEMANN" Always Remain Elastic



Plain white cachets all sizes at 2/- per 1000  
 Plain colored cachets all sizes at 2/6 p. 1000  
 Engraved or printed cachets with  
 any inscription, all sizes at 4/6 p. 1000  
 Extra charges when quantities of less than 1000 are ordered

We guarantee the quality of our cachets  
 while our prices will suit all buyers

## Closing Apparatus KAHNEMANN

Without cover, printed with the KAHNEMANN name

Prices for this Apparatus in Sterling

Apparatus	2 1/2	3	4	5	6
1	1/6	1/6	1/6	1/6	1/6
2	1/6	1/6	1/6	1/6	1/6
The partition wall for 2 apparatus	1/-	1/-	1/-	1/-	1/-

We supply also the apparatus for the use of the chemist, viz. the KAHNEMANN  
 When ordered through a chemist a discount of 10% is allowed

## GREAT SUCCESS!

Kahnemann's

Prepares tablets in all the required  
 Gold, silver, and copper  
 Engraving and printing  
 of the best

Gold nickel  
 Silver

Tablet

Compressor

for the Retail Drug Trade PRICE 23/-



Manufactured by KAHNEMANN & KRAUSCH, VIENNA, AUSTRIA  
 SOLE AGENT FOR GREAT BRITAIN

1, BRIDGES, 36 City Road, LONDON, E.C.4.

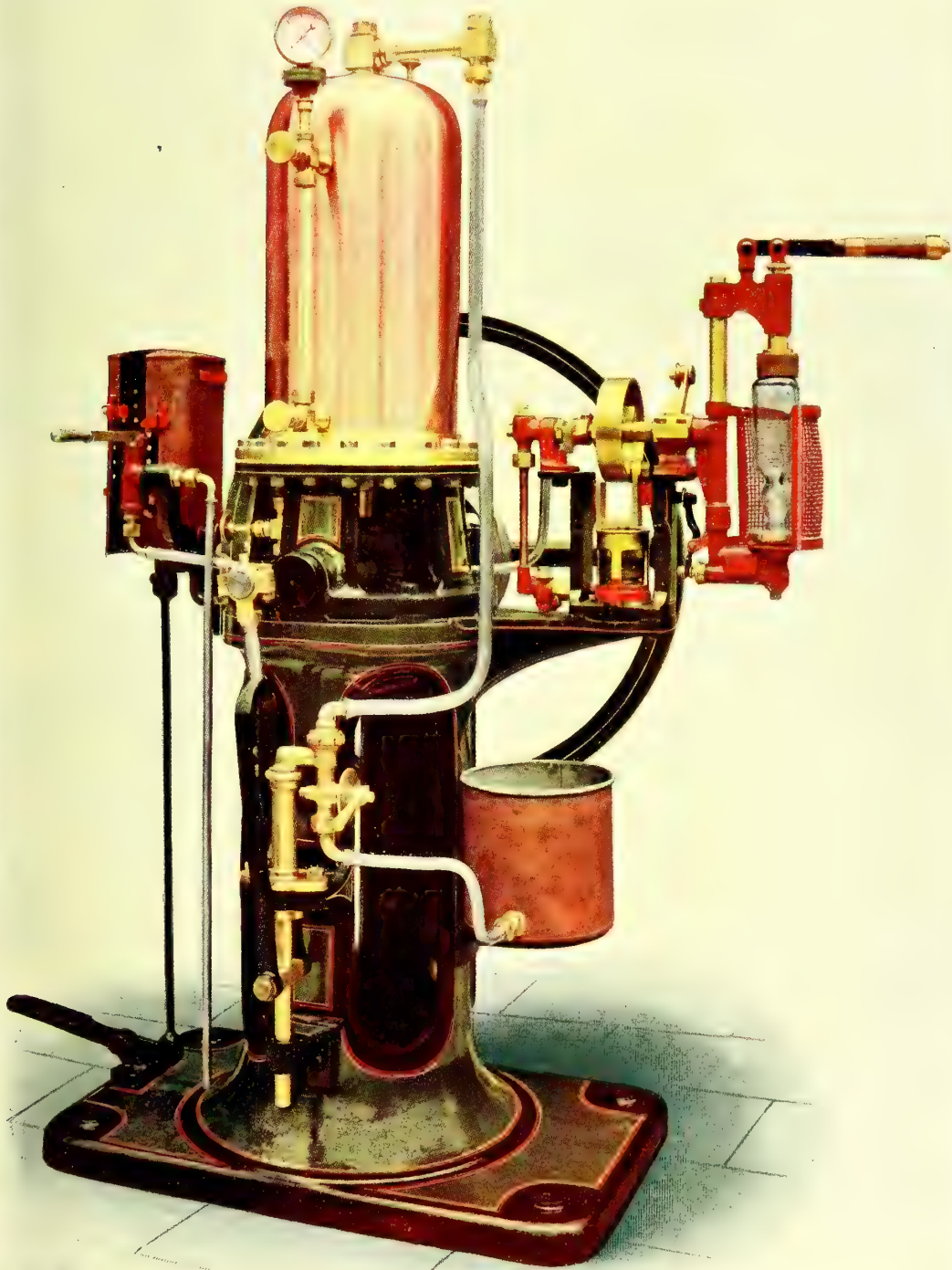
SPECIAL CACHETS FOR EXPORTS





# BRATBY & HINCHLIFFE, Limited,

THE "ORIENT" COMPLETE SODA WATER MACHINE



SOLE MAKERS AND PATENTEES:

BRATBY & HINCHLIFFE, LTD., SANDFORD STREET,  
BRANCHES:  
8, YORK STREET, GLASGOW.  
2a, D.E. END, BIRMINGHAM.  
46, FINCH LANE, LONDON, E.

ANCOATS, MANCHESTER.



# BRATBY & HINCHLIFFE'S COMPLETE "ORIENT" SODA WATER MACHINE

CAPACITY OF MACHINE 600 DOZENS PER DAY BY HAND.

FOR USE WITH LIQUEFIED CARBONIC ACID GAS, OR ADAPTED TO SUIT ORDINARY GAS WORK AT WILL.

(For Illustration see other side.)

♦ ♦ ♦ ♦



THIS is an apparatus specially designed for Chemists, Hospitals, Hotel Proprietors, Public Institutions, and the Continent. It is made for use with CO<sub>2</sub> (liquefied gas in tubes,) but when specially ordered can be made to pump gas and water in the ordinary manner. We strongly recommend this apparatus to all who require a first class machine at the lowest possible cost.

It requires no fixing, all the joints and connections being made by hand. The operator, therefore, simply requires to connect the tube containing the carbonic acid gas, and open the valve fixed at the top very slowly; the compressed gas is thus released and flows into the cylinder. When a pressure of 70 to 80 lbs. is indicated on the pressure gauge, the water pump should be started and continued until the cylinder is quarter full, when the filling of patent bottles may be proceeded with. In charging syphons, a higher pressure is necessary; this is usually fixed at from 175 to 200 lbs.

This machine is fitted with our patent saturator, and the quality of water made by it cannot be surpassed. Chemists, Confectioners and others are using this apparatus in all parts of the country, and we shall be glad to refer intending purchasers to those already having the machine in use. It is no toy, but made to last a lifetime.

It can easily be adjusted to work by power at a slight extra cost, and will turn out in this way far more than by hand.

For customers who are not in a position to procure carbonic acid gas in tubes, we can fit this machine with a gas and water pump (instead of water pump) for use with ordinary gas work.

The cylinder is very massive, which is a very important feature especially when filling syphons, and altogether it is the finest and most serviceable machine yet offered to the trade.

FULL PARTICULARS AND PRICES CAN BE HAD ON APPLICATION

♦ ♦ ♦ ♦

Soda Water Machinery of every description. Estimates and Complete Illustrated Catalogue free on application

♦ ♦ ♦ ♦

## TESTIMONIAL.

Chemist and Mineral Water Manufacturer,  
10, Victoria Street, Newton Stewart, N.B.,  
27th June, 1901

Messrs. Bratby & Hinchliffe, Ltd.

Dear Sirs,

I have much pleasure in informing you that the "Orient" Machine from you two years ago is now working and has worked all along—splendidly.

I work it both with hand and motive power, and it answers admirably in either. The best praise I have for your machine is the very substantial increase in my aerated water trade has increased in volume at least twenty times since I started using the "Orient."

Wishing it every success in the future.

Yours sincerely,

JAS. IRVING.



# THE BERKEFELD FILTER

POSSESSES THE FOLLOWING ADVANTAGES:—

1. It gives a continuous flow of perfectly pure water in large or small quantities according to pressure.
2. The filtered liquid is absolutely free from Germs and any solid particles.
3. The filtering Cylinder can be easily cleaned, as all impurities remain on its surface, from where they must be removed by a piece of loofah or soft brush.
4. Each filtering Cylinder can be thoroughly sterilized by being boiled in water for an hour, but the cylinder must be brought to boiling point gradually, as a sudden change of temperature might crack it.
5. After each cleaning the filtering Cylinder will regain the same rapidity of filtration as before.
6. It is the cheapest germ-proof filter in existence.

Drs. G. SIMS WOODHEAD and G. E. CARTWRIGHT WOOD having made exhaustive experiments, say in their special report to the *British Medical Journal*—"An enquiry into the relative efficiency of water filters in the prevention of infectious disease."

"The perfect confidence in the Carbon, Asbestos and similar filters has been singularly misplaced, not one of these filters which have been sold by hundreds of thousands, giving protection, most of them indeed becoming hotbeds of disease when once they become infected."

With regard to the experiments made with the Berkefeld Filter they say:—

"We may here state that we have at various times examined over fifty Berkefeld candles, and have in no case been able to satisfy ourselves that any one of them was imperfect as regards the prevention of the direct passage of test organisms.

Similar experiments were carried out with candle No. 1 fitted up in Fig. H of the maker's list, an exceedingly good model, which seems to us to subserve the functions of a filter more perfectly than any we have yet seen described, inasmuch as the filtered water finds its exit from the upper part of the case thus obviating any chance of contamination with unfiltered water due to leakage.

The rate of filtration is very rapid—in fact the output is so large that there is no reason why such filters should not supply sufficient water to meet all household requirements. We have already stated that any filter to be really satisfactory must supply all the water which is necessary for domestic requirements.

In the case of a candle No 14, which has been in domestic use for the last four years, the output after cleansing was still equal to that of a new candle. The surface of the candle was somewhat worn and irregular, but on testing its efficiency against test organisms, it was found that it still completely prevented their passage.

We must accordingly conclude from the extensive series of experiments carried out with these Berkefeld Filters that they afford complete protection against the communication of waterborne disease."

## THE BERKEFELD FILTER Co., Ltd.,

121, OXFORD STREET, LONDON, W.

Contractors to H.M.'S Government for the supply of Filters for the use of the  
Troops in South Africa.

## REPORTS AND TESTIMONIALS.

WELLINGTON COLLEGE,

WELLINGTON, SHROPSHIRE, Nov. 30th, 1898

"Gentlemen,—Two of your Filters in use here are found to be the best we have ever used. The cleansing the cylinders requires a little care. Beyond this there is no trouble, provided the Filters are properly fixed. I should like to see them in use in every school and institution in the country."

JOHN BAYLEY, Principal.

"We have used this kind of filter in our laboratory for a number of years, and have had considerable experience with it also in domestic filter, and we are satisfied that for giving safety from contamination of water with sporules of disease, there is no other equal to it."

Chemical Laboratory, Manchester.

GRACE-CALVERT & THOMSON

"At your request I have conducted an exhaustive series of bacteriological tests with water filtered through a BERKEFELD FILTER; the experiments have extended over a period of two months, during which time water has been passing through the filter continually. It is important to note that throughout the duration of the tests it was not necessary to sterilise the filtering candle."

There is no question that the filter removes all disease germs and renders the water bright, clear, and palatable."

Laboratory, Plough Court, London, E.C.

R. H. HARLAND, F.I.C., F.C.S.  
Public Analyst.

"From exact experiments I have made I am convinced that your filter is capable of producing sterilised water for use in the Bacteriological Laboratory, and that, as a travelling filter, it will be of great benefit to persons visiting places where drinking water is suspicious, especially with regard to Typhoid Fever and Cholera."

Chemical Bacteriological Laboratories,  
Fort Royal, Worcester.

HORACE SWETE, M.D., D.P.H.,  
Public Analyst of Worcester.

Medical Officer of Health Droitwich Rural Sanitary District

"The Glasgow unfiltered water was slightly turbid, whilst the filtered water was perfectly clear. The bacteriological examination of the filtered water showed the latter to be practically free from micro-organisms."

University College, Dundee.

PROF. PERCY J. FRANKLAND, Ph.D., BSc., F.R.S.

"The filter gave great satisfaction during our expedition through the desert. The water that we had to carry in castleskins got very foul, but it was rendered clear and wholesome by passing it once through your filter. Owing to the breakdown of the larger filter—NOT A BERKEFELD ONE—THE ONE I SEND YOU now had to filter for seven persons, and it did its work well."

12, Horley Road, Cambridge.

F. C. BURKET

"It is thus evident that the BERKEFELD FILTER will sterilise water passed through it, leaving the microbes and mud on the candle, whence they may be easily removed by washing and rubbing with the fingers, or with a brush. The Berkefeld Filter seems to me, therefore, the most practicable."

Royal Institution Laboratory, Manchester.

PROF. WILLIAM THOMSON

"With MR. MACKIE'S thanks, and with a grateful appreciation of the EXCELLENCE OF YOUR FILTERS through the course of the year. There is nothing else to touch them in simplicity and effectiveness."—Sedburgh School.

"With reference to the filter you sent us, we beg to inform you that it is doing nicely, and we are very well pleased with it. Cromac Springs, Belfast.

WHEELER & CO., LTD., Mineral Water Manufacturers

"In reply to your letter of the 23rd we are happy to inform you that we have had your filters in use just over a year, and the result of our experience is that they have far exceeded our most sanguine expectations as regards their effect upon the quality of the water we have brewed since using them. We shall be pleased for you to make use of this letter if of service to you. Wishing you all the success your excellent invention justly deserves.

P.S.—We had forgotten to speak of the working of the machines, each filter of 37 candles being cleaned in a few minutes with the greatest ease and without removing the candles. The repairs to present time (although constantly at work) have been nil, and we believe they will run for years without further expense."

N.N. BREWERS.

Writers object to their firm being mentioned, but the original letter can be seen at our office.

CADOGAN SQUARE, LONDON, S.W.

"In my recent expedition to SOMALI-LAND, I took out two of your Travellers' Pump Filters for a party of six persons. I consider them quite the best travellers' filters that I have yet met with.

"I would, however, recommend that you should supply extra India-rubber washers as well as a key or clamp to remove the cap."

E. LORT PHILLIPS, F.Z.S., F.R.S.

STAFF SURGEON DR. PROCHNICK states his conclusions in regard to the BERKEFELD FILTER were that no filtration yet discovered offered so many practical advantages, and repeated tests showed that all samples tested were absolutely free from bacteria."

HYGENIC CONGRESS, LONDON, 1898.

## Full Illustrated Catalogue, &c., &c., free on application.



Supplement to The Chemist & Druggist, July 28th 1900.

# ROBERT GIBSON & SONS LTD

## MANCHESTER & LONDON

ENGLAND



These Chocolate Worm Cakes are now sent out in three sizes of  
**BEAUTIFULLY ENAMELLED COUNTER SHOW TINS.**

1 GROSS, 1/2 GROSS & 1/4 GROSS SIZES.

The Cakes are wrapped in tin foil to preserve them from atmospheric influence and then enclosed in an envelope printed with directions.

Every Wholesale House in or out of London can supply or  
Indents may be sent direct to Manchester.

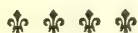
PRICE LISTS AND SAMPLES ON APPLICATION.



# ROBERT GIBSON & SONS, LIMITED, MANCHESTER & LONDON.

## A. B. C. COUGH PASTILLES

**Sell Well !**



Sent out in  
**4 lb.**

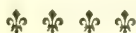
GLASS  
SHOW  
JARS,

Price **2s.** per lb.

(JARS NOT CHARGED.)



Every wholesale House in  
or out of London can  
supply, or indents may  
be sent direct to Man-  
chester.



**Please Everybody !**



As an inducement to the  
trade to keep a larger stock  
of our Jujubes, orders for  
24 lbs. may consist of 6  
4-lb. Jars, Assorted, in-  
cluding the

**A B C PASTILLES,**

ALSO

**Glycerine Pastilles,  
Voice Jujubes,  
Delectable Jujubes,  
Magnum Bonum  
Jujubes**

**Menthol Pastilles,  
Menthol**

**and Eucalyptus  
Glycerine and  
Black Currant  
Cinnamon Pastilles,**

**AND MANY OTHERS.**

**Price 1/6 per lb. net.  
Carriage Paid.**



**PRICE LISTS AND SAMPLES ON APPLICATION.**



# BRUNNER, MOND & CO. LIMITED,

## NORTHWICH, CHESHIRE.

CRESCENT



BRAND.

## A PURE SUBSTITUTE

For Chalk, Whiting, Limestone, Marble, &c.

We strongly urge all Mineral Water Manufacturers not now using Bicarbonate of Soda, before committing themselves to Whiting for the coming Season, to try a 2 cwt. Bag of our Bicarbonate of Soda, which we shall be pleased to send off carriage forward on receipt of Postal Order for 10s.

# MINERAL WATER BICARBONATE.

Specially made for the PRODUCTION of CARBONIC ACID GAS  
for AERATED WATERS.

## ADVANTAGES.

Generator yields three times the amount of Gas per Charge.  
Generator keeps much Cooler and Produces Cooler Gas.  
Less than half the Acid required for the same quantity of Gas.  
Perfectly Clear Liquors—No Lime Mud to Choke Drains.  
Waters obtained have Sharper, Cleaner Taste.

N.B.—No alteration whatever of the Machine is required.

*Samples, Working Instructions, and full particulars on application.*

[PLEASE TURN OVER.]

BRUNNER, MOND & CO.



LIMITED, NORTHWICH.

---

## INSTRUCTIONS FOR USING BICARBONATE OF SODA IN MAKING MINERAL WATERS.

---

### PRODUCTION OF CARBONIC ACID GAS.

#### PROPORTIONS TO BE USED:

1 cwt. Bicarbonate.

17 to 20 gallons of Water.

3 $\frac{3}{4}$  gallons (say 68 lbs.) Sulphuric Acid of 167 Twaddle.

**THE METHOD OF CHARGING** the Generator, and the running in of the Acid, is exactly the same as when Whiting or Marble is used; no agitation is required except at the very end of the charge. About 50 % more bottles will be charged than with the same weight of Whiting.

A Generator capable of holding 1 cwt. of Whiting, 36 gallons of Water, and 6 $\frac{1}{4}$  gallons (1 cwt.) of Acid can be charged with 2 cwts. Bicarb., 34 gallons of water, and 7 $\frac{1}{2}$  gallons (1 $\frac{1}{4}$  cwt.) of Acid. This will give three times as much Carbonic Acid Gas as is given by the Whiting process, and consequently three times as many bottles per charge, an immense advantage where space is limited and when business is brisk.

The proportion of water can be varied according to circumstances. With the above proportions the liquor from the Generator (which liquor is always perfectly clear and free from sediment), if run into tubs, or into crystallizing pans, will crystallize in about 10 hours at ordinary temperatures. The Crystals obtained are Glauber Salts, a readily saleable article, in place of the mud from Whiting, so disagreeable to handle, and so difficult to get rid of.

It will be seen from the proportions given above that only about *two-fifths* of the Acid and two-thirds of Bicarbonate (weight for weight, as compared with Whiting) are required to produce the same amount of Carbonic Acid Gas.

Mineral Water Manufacturers who use the above process might with advantage send their Glauber Salts to the firms who supply them with their Acid.

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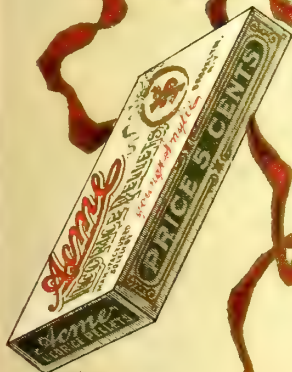
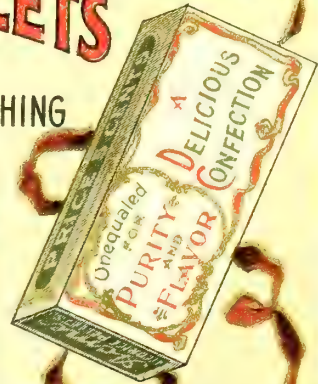
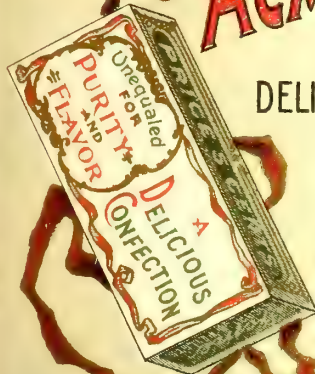
BRUNNER, MOND & CO. LIMITED,  
NORTHWICH, ENGLAND.





# YOUNG & SMYLLIE'S ACME LICORICE PELLETS

A DELICIOUS CONFECTION  
DELICATELY FLAVORED AND MOST REFRESHING



SOLD BY  
**DRUGGISTS**  
AND **CONFECTIONERS**  
THE WORLD OVER.





We beg to call the attention of Chemists and Druggists to the cuts herewith shown representing the leading Licorice Specialties of American manufacture. Our brands of Licorice have been before the public many years and their constantly increasing sale attests their deserved popularity. The articles shown have established a reputation for Purity and Palatability and being put up in attractive containers the Manufacturers have no hesitation in expressing their conviction that the general excellence of the Y & S productions will appeal to the most exacting and discriminating purchasers.

Y & S Stick Licorice in 5lb. boxes, 4, 6, 8, 12 and 16 sticks to the pound. Also packed in laurel leaves, bulk, cases of 25, 50, 125 and 250 lbs. net.

Corrugated Y & S Stick Licorice, averaging one ounce each, packed only in boxes containing 80 sticks.

Acme Licorice Pellets (as displayed in color on reverse) put up in 5 lb. glass-front tins, and in one ounce packages, 40 to the box.

Licorice Lozenges (cylindrical in shape) in 5 lb. glass-front tins; also packed in 5 lb. glass-jars.

Manhattan Wafers (Pliable Licorice) in boxes of 2½ lbs. each.

Tar, Licorice and Tolu Wafers, in 5 lb. glass-front tins.



Our selling Agents for the drug trade of Great Britain, Messrs. F. SCHUTZE & CO., of No. 89 Southwark Street, London, S. E., will carry stocks of the Y & S goods, and will be pleased to furnish samples and catalogues, and submit prices;—or, direct applications to the undersigned, for samples and prices, will receive prompt attention.

**YOUNG & SMYLYE,—Established 1845.**

(Borough of Brooklyn,)

New York City.



**Good!**  
It's Mason's  
EXTRACT  
OF  
HERBS.  
D. BOTTLE MAKES 8 GALLONS  
NON-INTOXICATING BEER  
IMITATED BUT NOT EQUALLED.



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# **Tomlinson & Co.'s "Dairy Helps."**

Tomlinson & Co.'s Butter Powder.

Tomlinson & Co.'s "Preservative."

Tomlinson & Co.'s Butter Colour.

Tomlinson & Co.'s Cheese Colour.

Tomlinson & Co.'s Cheese Rennet.

Tomlinson & Co.'s Household Rennet.

Safe packages, attractive style. These are the original and leading lines.  
Sold by Chemists in Agricultural Districts for the past 50 years. Stocked by all  
Wholesale Houses. Liberal terms. Free Advertising Matter. Please see that our  
Trade Mark is on each Label.

TRADE



MARK.

ONLY ADDRESS:—

**TOMLINSON & HAYWARD, LINCOLN.**

Established 1842.

SUPPLEMENT TO THE "CHEMIST & DRUGGIST," JULY 28TH, 1900.

# **HAYWARD'S YELLOW "PASTE"**

***The Improved Sulphur Dip.  
Mixes at once with Cold Water.***



**In Packages, 1 -, for 20 to 25 Sheep; also in Tins, 5 -, for 150 Sheep.**

Our Trade is with the Chemist not direct with the Farmer. We secure you a profit, price is not "cut." If you are not stocking please write us.

ONLY ADDRESS:

**TOMLINSON & HAYWARD, LINCOLN.**

Established 1842.



# NATURAL MINERAL WATERS

SALTS, PASTILLES, &c.

## Hunyadi János

## INGRAM & ROYLE, LTD.

Head Office—EAST PAUL'S WHARF, LONDON, E.C.

Sole  
Agents

# VICHY

State  
Springs

## CARLSBAD WATER AND SALTS.

Æsculap, Condal, Contrexéville, Franz - Josef,  
Kronenquelle, Levico, Oberbrunnen, Rosbach,  
Rubinat, St. Galmier, St. Marco, Selters, Vals,

AND ALL OTHER NATURAL MINERAL WATERS.

## INGRAM & ROYLE, LTD.

LONDON, LIVERPOOL, & BRISTOL.

(26 Upper Thames St., E.C.)

(19 South John St.)

(Bath Bridge.)

Price List and Pamphlet on Application. Special Discounts for Export.

# 11 GOLD MEDALS—49 HIGHEST AWARDS

**A PROFITABLE SUBSIDIARY BUSINESS** is often wanted by Chemists in the United Kingdom and abroad. A

**SODA WATER MACHINE** fills the want, and it will be found that Chemists, Storekeepers, &c., have a valuable adjunct to their business when they possess a machine. A Customer in Cape Colony writes:—

FEBRUARY 26TH, 1900.

CAPE COLONY.

MESSRS. BARNETT & FOSTER.

GENTS,—You will be pleased to know that the machine I purchased 2½ years ago has been running almost daily without a hitch. I think this fact will prove volumes to any intending purchaser, as I will defy anyone to produce a more out-of-the-way place, away from railways, skilled labour, &c., than this L——. I may tell you that this machine ("Z" size Niagara) earned for me, from July 1st, 1898, to June 30th, 1899, the very neat sum of £605. Of course, this business is only an auxiliary to my general business.

Yours faithfully,

E—— S——.

The above proves the ease with which a Soda Water Machine may be worked in the most outlying districts.

The smallest machines produce the same quality waters as the largest, and all are made from the best-class materials, and all internal parts coated with pure grain tin, thus ensuring purity and freedom from contamination.

**FULL DESCRIPTIVE CATALOGUE OR ESTIMATES SENT POST FREE** upon our receiving particulars of output required.

**MACHINERY AND APPLIANCES OF ALL DESCRIPTIONS FOR THE MINERAL WATER & ALLIED TRADES.**

**Bottles. Syphons. Seltzogenes. Cases, &c.**

**BARNETT & FOSTER,**

Diagara Works, 26<sup>T</sup> Eagle Wharf Road, LONDON, N.



SEE NEXT PAGE.





# 11 GOLD MEDALS. 49 Highest Awards.

## THE "LILLIPUTIAN."

Complete with Gas making Apparatus, all Pipings and Connections included.

No. 1 size, producing 600 dozen in 10 hours	.. ..	£57 10 0
No. 2 " " 1,000 " " "	.. ..	£68 10 0

No. 1 is fitted for Hand Power; No. 2 for Motive Power.

## THE "LANCASHIRE."

Complete with Gas-making Apparatus, all Pipings and Connections included.

No. 0 size, producing 2,500 dozen in 10 hours	.. ..	£154 0 0
No. 1 " " 1,500 " " "	.. ..	£131 15 0
No. 2 " " 1,200 " " "	.. ..	£96 2 6

## THE "NIAGARA."

This type is fast superseding all other makes, and is used in the leading manufactories of the world.

Size.	Producing Capacity per day.	Price, with Gas-making Apparatus.
Z .. ..	100 dozen .. ..	£30 0 0
O .. ..	300 " .. ..	£45 0 0
O1 .. ..	450 " .. ..	£52 0 0
A .. ..	600 " .. ..	£70 0 0
B .. ..	1,200 " .. ..	£85 0 0

All are Fitted for Hand and Power.

**NOTE.**—We include all necessary Connecting Pipes free without extra charge, so that the machinery is ready for work upon arrival.

FOR LARGER SIZES SEE CATALOGUE.

## THE "COMPACT."

For use with Compressed Carbonic Acid Gas.

In use by the leading Chemists, Hotels, Hospitals, and Public Institutions throughout the United Kingdom.

The Most Successful Machine of the times.  
The Perfection of Simplicity. Automatic Carbonation.

### PRICES:

No. 1. Capacity 1,200 dozen per day, including Filling Machines for Bottles and Syphons	.. ..	£30 0 0
No. 2. Capacity 600 dozen per day, including Filling Machines for Bottles and Syphons	.. ..	£48 0 0
No. 3. Capacity 300 dozen per day, including Filling Machines for Bottles or Syphons	.. ..	£33 0 0

## THE "CYLINDER" SODA WATER PLANT.

This is a Cheap Apparatus designed for use with Compressed Carbonic Acid Gas, for serving Soda Water on the Counter by means of a silver-plated Counter Stand.

PRICES ACCORDING TO REQUIREMENTS, FROM £15.

Specially suitable for Hotels, Chemists, Confectioners, Pastrycooks, &c.

## "NIAGARA" MICROBE-PROOF FILTERS.

The most Reliable, Quickest, and Cheapest Germ Filter upon the market.

### COMPLETE CATALOGUE OF THESE FILTERS POST FREE.

The most Reliable, Strongest, and Quickest Filter on the Market.

	Output per hour.
No. 1. 20 gallons .. ..	£1 17 6
No. 3. 60 " .. ..	£3 12 6
No. 5. 100 " .. ..	£5 10 0
No. 9. 180 " .. ..	£7 10 0
No. 15. 300 " .. ..	£12 10 0

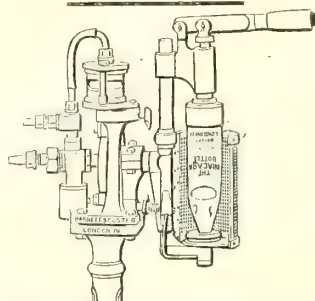
## TAP FILTER.

Complete with Screw-down Cook and Glass Case for Filter Tube .. .. 16/-

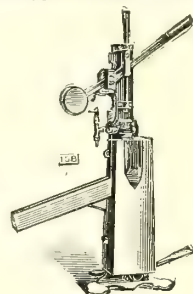
ALSO SUPPLIED FOR TABLE AND HOUSEHOLD USE.

Illustrated Descriptive Catalogue of every requirement for the Mineral Water Trade on application.

### ADVANCE 10%.



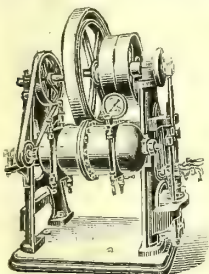
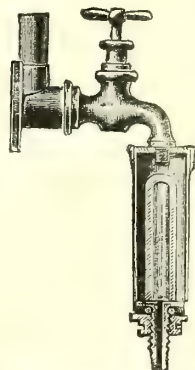
THE "IDEAL" FILLING MACHINE.  
For Ball-Stoppered Bottles. From £7 7 0.



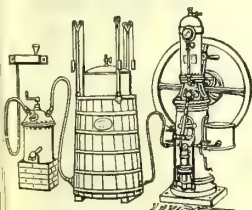
THE LEVER FILLING MACHINES.  
For Cork Bottles. From £9 9 0.



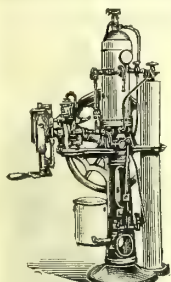
SYPHONS AND BOTTLES  
At Lowest Prices.



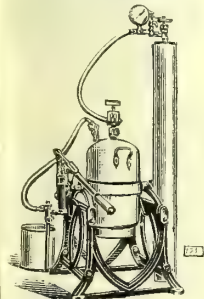
THE "LANCASHIRE."



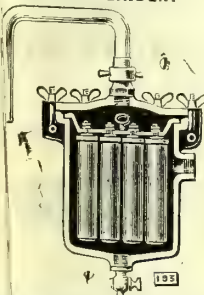
THE "NIAGARA" SODA WATER MACHINE.



THE "COMPACT."



THE "CYLINDER."



**BARNETT & FOSTER NIAGARA WORKS, 26<sup>TH</sup> EAGLE WHARF ROAD, LONDON, N.**







We shall be happy to send our new and useful illustrated Booklet on Syphon Repairing, free of charge, on application.

The design and construction of our well-known

## "No. 1 English Syphons and Seltzogenes"

will bear closest examination, the most modern machinery and best engineering practice being adopted to ensure accurate fitting.

EXCELLENT WORKMANSHIP.  
SOUND CONSTRUCTION.  
METAL FREE FROM LEAD.  
EFFECTIVE ENGRAVING.  
DURABLE PLATING.  
THOROUGH TESTING.

These are points which characterise our Syphons & Seltzogenes, and merit your consideration.

Why order from Abroad?

We are the largest manufacturers and users of syphons in the British Isles, and shall be glad if we can be of any service to you. Write us.

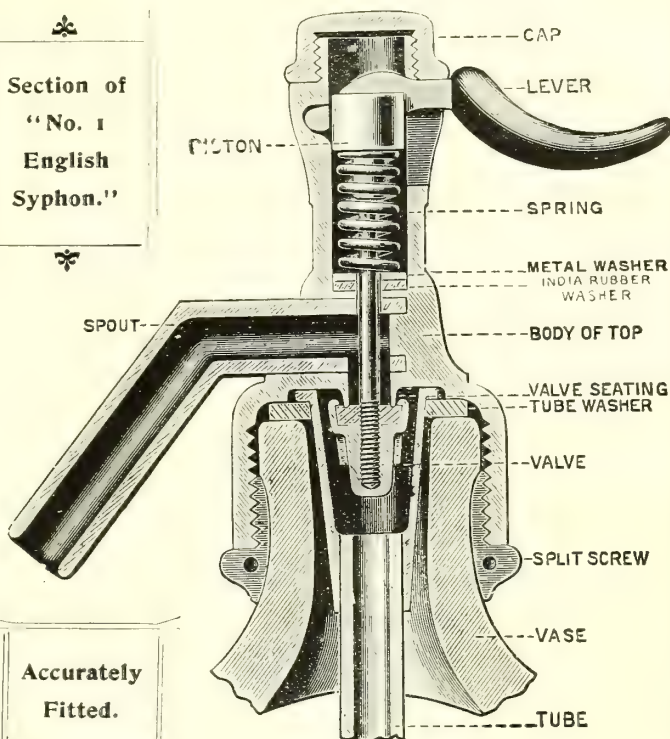
# Idris & Co., Ltd.,

Syphon & Seltzogene Manufacturers,

1 PRATT STREET, CAMDEN TOWN, LONDON, ENG.

Telegrams: "IDRIS, LONDON."

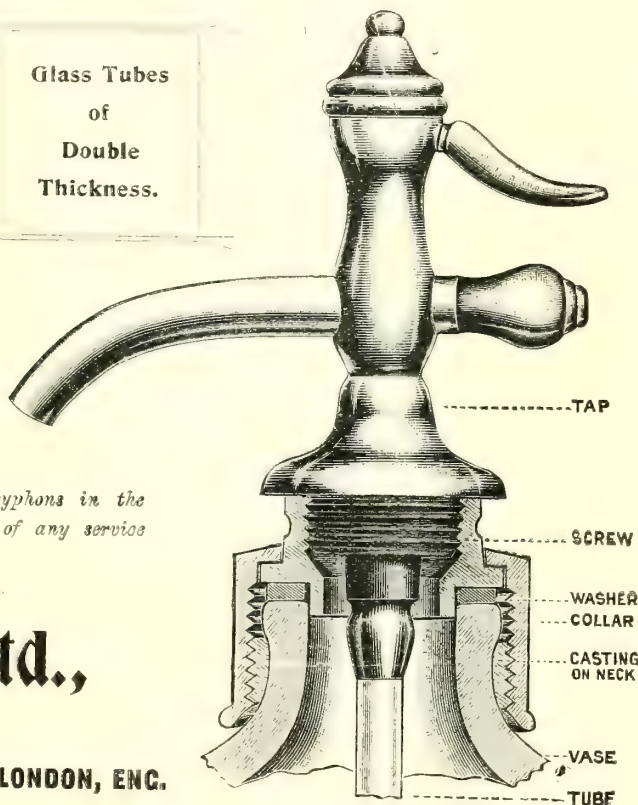
Section of  
"No. 1  
English  
Syphon."



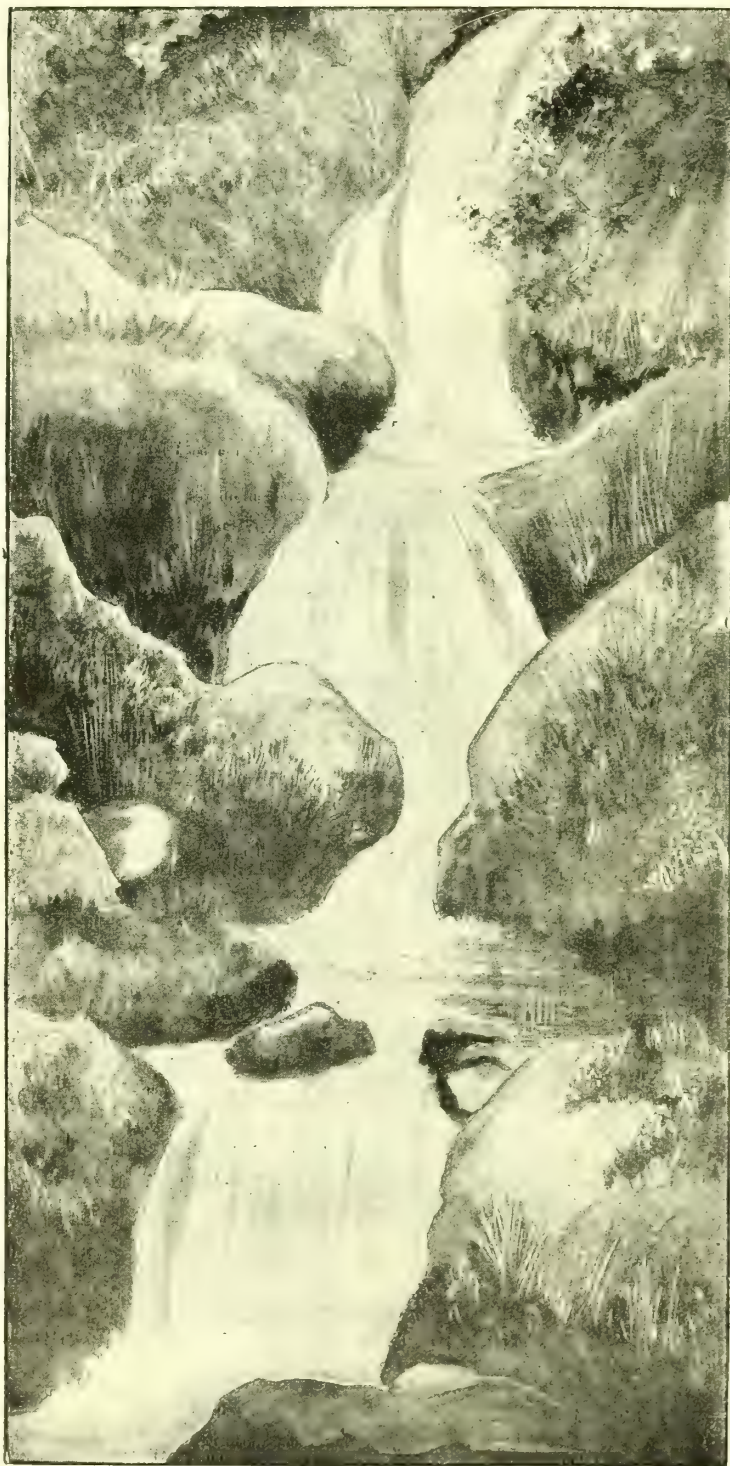
Accurately  
Fitted.

"Mechanically Correct."

Glass Tubes  
of  
Double  
Thickness.



Telephone: 522 (King's X).



**9 Gold  
Medals.**



# IDRIS Royal Mineral Waters,

As supplied by  
Royal Warrant to  
THE QUEEN,

COMMAND THE  
**LARGEST SALE.**

All Chemists should stock  
these  
well-known Waters.

**SAMPLE CASE FREE.**

View of Waterfall at Cader Idris, North Wales. The Property of Idris & Co., Lim.

## IDRIS & CO., LTD.

Head Office and Factories: **CAMDEN TOWN, LONDON, N.W.**

Branch Factories: LIVERPOOL, SOUTHAMPTON, and CANTERBURY.

Depots: ENFIELD, WATFORD, TEDDINGTON, BOURNEMOUTH, PORTSMOUTH, GLASGOW.



# WILLIAM HAY, LIMITED.

TO AERATED WATER MANUFACTURERS.

# HAY'S SOLUBLE ESSENCES

ARE GUARANTEED TO BE "THE" FINEST IN THE MARKET.

*Special Terms to Exporters of*

HAY'S SOLUBLE ESSENCES OF GINGER,  
HAY'S SOLUBLE ESSENCES GINGER ALE,  
HAY'S SOLUBLE ESSENCES LEMON,  
HAY'S GINGER ALE EXTRACT,  
HAY'S KOLA, LIME JUICE, and ORANGE  
JUICE CHAMPAGNE ESSENCES,  
HAY'S LEMON SQUASH ESSENCE,

For the Manufacture of

**DELICIOUS NON-ALCOHOLIC BEVERAGES.**

Orders for Two Gallons and upwards of one kind of Essence may be shipped under Bond.

*Indentors when ordering should specify HAY'S manufacture.*

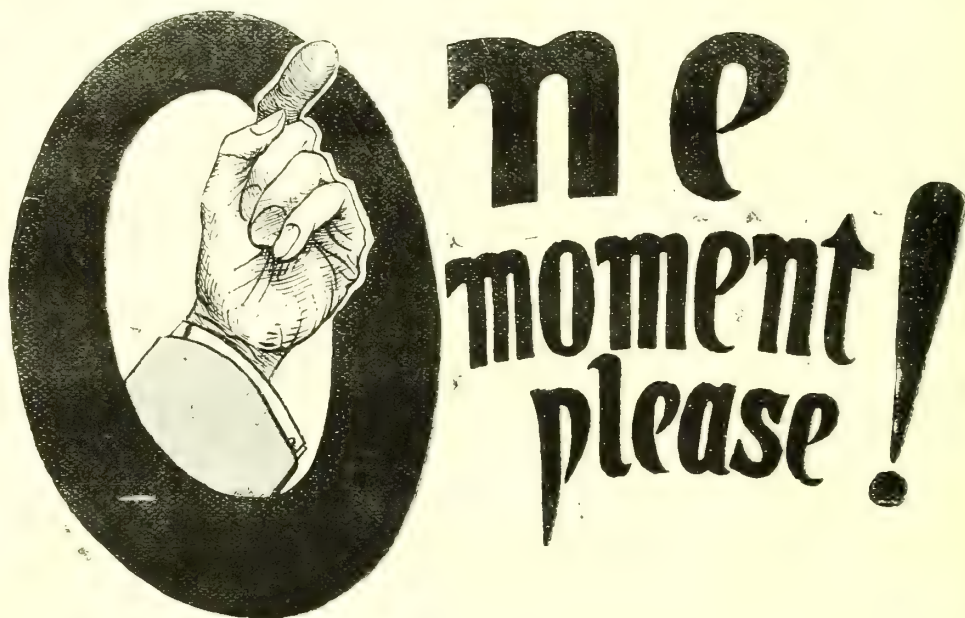
# GOLD SILVER MEDALS

HIGHEST TESTIMONIALS FROM ALL THE MEDICAL JOURNALS  
THESE ESSENCES ARE UNRIVALLED FOR THEIR EXQUISITELY FINE FLAVOR AND AROMA

# HULL

PRICE LISTS FREE ON APPLICATION.

Manufacturing Chemists, HULL and LONDON.



Has it ever occurred to you how wilfully blind you are to your own interests in neglecting to avail yourself of the advantages that CAMWAL, LTD., offers?

## **A VALUABLE CHEMIST'S PROPERTY.**

TO CHEMISTS WHO ARE INTERESTED IN THE SYPHON TRADE.

*In CAMWAL Table Waters Chemists possess a most valuable property.*

**Firstly**—Because CAMWAL Waters are not supplied to ordinary retailers; the Chemist, therefore, where he has introduced the CAMWAL Brand, cannot lose customers to Grocers, Wine Merchants, &c.

**Secondly**—CAMWAL, LTD., can prove to any Chemist who hesitates to join, that those who have introduced CAMWAL Waters have greatly increased their sales, and that it is quite a common thing for Chemists dealing in this, their own brand, to do from 12 to 24 dozen weekly, where they used to do less than half that quantity when dealing in a brand that every retailer in their neighbourhood was stocking.

**Thirdly**—CAMWAL Waters are made by Analytical Chemists for Chemists, and the demand for them by the discriminating consumer is steadily increasing; do not, therefore, refuse to supply, and so retard the sale and popularity of one of the few valuable properties possessed by Chemists.

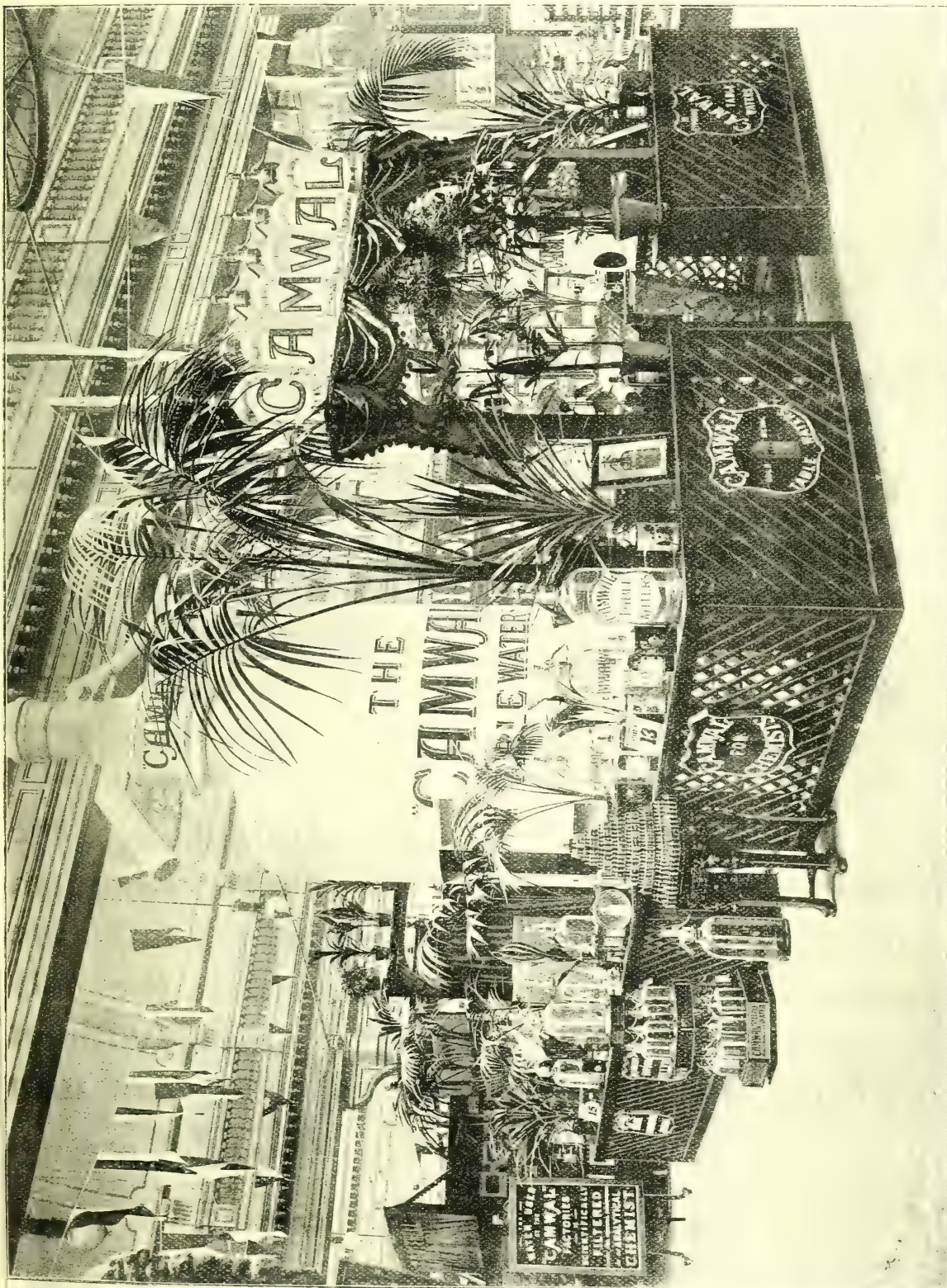
# **CAMWAL**

**LIMITED**

Factories: LONDON, MANCHESTER, BIRMINGHAM, BRISTOL, HARROGATE, MITCHAM.

Head Offices: 112 PEMBROKE ST., LONDON, N.





THE CAMWAL STAND AT THE RECENT CHEMISTS' EXHIBITION, MANCHESTER



Telegraphic Address—"SACARINO LONDON."

Telephone No. 197, Bank.

# The Saccharin Corporation, Ltd.

165 QUEEN VICTORIA STREET, LONDON, E.C.

## ***Saccharin*** OF ALL STRENGTHS

***Highest Possible Strength.***—550 times sweeter than pure Cane Sugar. This strength is recommended in preference to any other.

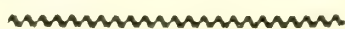
***Ordinary Strength.***—330 times sweeter than pure Cane Sugar.

***Soluble.***—475 and 300 times sweeter than pure Cane Sugar.

***Crystals.***—450 times sweeter than pure Cane Sugar.

***Crystallose.***—440 times sweeter than pure Cane Sugar.

THE 3 LAST STRENGTHS ARE SOLUBLE IN COLD WATER.



The Saccharin Corporation, Limited, are the owners of All Patents for the United Kingdom and Colonies for the commercial manufacture of Saccharin, and their Saccharin is the only Saccharin that can be purchased without ***risk of legal proceedings*** or the necessity for ***any Indemnity.***

FULLEST PARTICULARS ON APPLICATION TO

## The Saccharin Corporation, Ltd.

165 QUEEN VICTORIA STREET, LONDON, E.C.



# SACCHARIN.

---

THE SACCHARIN CORPORATION

v.

THE ANGLO-CONTINENTAL CHEMICAL WORKS, LIMITED,  
AND REITMEYER.

The following is an extract of the Judgment of Mr. Justice Buckley, originally delivered on 6th April, 1900, and subsequently confirmed by the Judge on 8th May, 1900, relating to the Injunction granted against the Defendants:

"This Court doth Order and adjudge that the Defendants, the Anglo-Continental Chemical Works, Limited, and Robert Reitmeyer, their servants and agents, be restrained, during the continuance of the Letters Patent granted to Harold Imray, dated 29th December, 1894, and No. 25273 in the Statement of Claim mentioned from importing into England and from manufacturing, selling, supplying and using in England Saccharin of the strength 1.555, 1.350 and 1.300 and Saccharin of strength 555 **under the name of "SACCHARIN" "TIGRESS BRAND"** manufactured according to or in the manner described in the Specifications filed in pursuance of the Applications for the said Letters Patent or according to or in manner only colourably differing from the same and generally from infringing the rights of the Plaintiffs in respect of the said Letters Patent."

THE SACCHARIN CORPORATION, LTD.,

165 QUEEN VICTORIA STREET,

LONDON, E.C.

# SALUTARIS

CARRIAGE PAID BOTH WAYS.



**NO CUTTING  
OF PRICES  
PERMITTED.**

*Retail prices on application.*

London and Suburbs, within  
radius of Carter, Paterson & Co.,  
who deliver Full Goods and collect  
Empties free of charge.

Places distant from London.

Scale	Not exceeding 30 miles		Over 30 miles	
	A	B	C	D
	80	130	130	180
	130	180	180	250
	180	250	250	
	250			

**NET TRADE PRICES for Cash with Order.**

\* Cases and Bottles (returnable) charged extra  
as below.

Per doz. Quarts	Per doz. Pints	Per doz. Nips	Per doz. Syphons	Per gall. in Case of 2 Jars	Per gall. in Case of 4 Jars
2 4	1 5	1 3	4/-	7d.	6d.
DISTRIBUTING AGENTS WANTED					
2 10	1 11	1 6	4 6	8d.	8d.
3 1	2 2	1 7	4 6	9d.	9d.
3 4	2 2	1 9	4 6	10d.	10d.
3 7	2 2	1 9	4 6	11d.	11d.
3 10	2 5	1 9	4 6	1 1	1 1
4 1	2 8	1 9	4 6	1 3	1 3

**In Minimum  
Quantities  
of**

1 doz. Qts., 2 doz. Pts., 4  
doz. Nips, 1 doz. Syphons,  
1 Case of 2 1-gall. Jars,  
1 Case of 4 1-gall. Jars.  
3 doz. Qts., 6 doz. Pts., 12  
doz. Nips, 3 doz. Syphons,  
4 Cases of 2 1-gall. Jars,  
or 2 Cases of 4 1-gall. Jars.  
6 doz. Qts., 12 doz. Pts.,  
16 doz. Nips, 3 doz.  
Syphons, 4 Cases of 2  
1-gall. Jars, 2 Cases of  
4 1-gall. Jars.

\* Deposit on Cases and Bottles (returnable) charged as follows:—1 doz. Quarts, 3/-; 2 doz. Pints, 4/-; 4 doz. Nips, 7/-; 1 doz. Syphons, 26/-; 3 doz. Quarts, 9/-; 4 doz. Pints, 8/-; 6 doz. Pints, 12/-; Case of 2 1-gall. Jars, 4/6; Case of 4 1-gall. Jars, 9/-. These amounts are refunded when the Empties are returned in good order.

Certain places served by sea are excepted from the above rates, such as Aberdeen, Belfast, Brechin, Cork, Dublin, Dundee, Edinburgh, Forfar, Glasgow, Kildare, Limerick, Londonderry, Montrose, Newbridge, Newcastle-on-Tyne, Perth, St. Andrews, Tipperary, &c., which are supplied at Scale B; Isle of Wight, Jersey, and Guernsey at Scale C; Alderney and Sark at Scale C.

## SALUTARIS WATER CO.

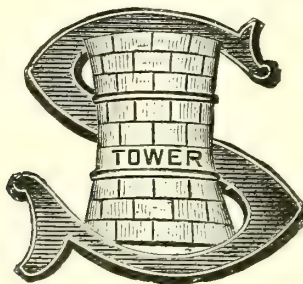
The Distillery, 236 Fulham Road, London, S.W.

Telephone No. 629 Kensington.

Telegraphic Address: "SALUTARIS LONDON."

# STOWER'S LIME JUICE

See that each Bottle bears the  
**REGISTERED TRADE MARK,**  
and also the Signature (in Red) of the  
**SOLE MANUFACTURERS.**



*Alex. Riddle & Co.*

**SOME REASONS FOR STOCKING.**

It is the ORIGINAL.  
It is absolutely PURE.  
It is attractively PUT UP.  
It is largely ADVERTISED.  
It is in great DEMAND.  
It is supplied to HER MAJESTY.  
It has been specially selected for the Hospital Ships  
"PRINCESS OF WALES" and "MAINE," and the  
Imperial Yeomanry Base Hospital.  
It is exclusively recommended by the MEDICAL PRO-  
FESSION.  
It is supplied to all the principal HOSPITALS.  
It takes up no time to Sell.  
It leaves a Fair Profit.

**FREE TASTING SAMPLES AND COUNTER BOTTLES,**

Handsome Show Cards, Attractive Bills,  
and other Advertising material liberally and  
freely supplied to the Trade.

*Sole Manufacturers and Proprietors,*

**ALEXANDER RIDDLE & CO., LTD., 36 & 38, COMMERCIAL ST., LONDON, E.**



Established  
1855.

ROBINSON'S ORIGINAL

Excise Drawback on  
Export Orders.

# CONCENTRATED WATERS.

STANDARDISED TO B.P. 898.

When diluted in the proportion of one part to forty parts of water at 60° temperature, they faithfully represent the Medicinal Waters of the British Pharmacopoeia. They are always of uniform strength, and will keep good any length of time in any climate.

Aqua Amygd. Amar. Conc. (U.S.)	4/- per lb.	Aqua Cassia Conc.	4/- per lb.	Aqua Ment. Virid. Conc.	4/- per lb.
Anethi, Concent.	4/- "	Flor. Aurant.	8/6 "	Pimenta	4/- "
Anisi	4/- "	" Sambuci Conc.	8/6 "	" Rosgali	4/- "
Camphore	4/- "	" Foeniculi Conc.	4/- "	" Rosmarini	4/- "
Cayal	4/- "	" Menth. Pip. Conc.	4/- "	" Rose	8/6 "
Cinnamon, Ver. Conc.	6/- "	" Ang. Conc.	8/- "	" Virgin	10/6 "

The above may be had in ½-lb. or 1-lb. Bottles and upwards, through most of the Wholesale Drug Houses.

Each Bottle has the Inventor's Protection Label over the cork, without which none are genuine.

## SUPERIOR ORANGE WINE (Vin. Aurantii, B.P. 1898).

Samples of any of the above sent free on application from

B. ROBINSON & CO., LTD., Distillers and Brewers of British Wines, CHURCH ST., PENDLETON, MANCHESTER.

A. MILLAR & CO., LTD., DUBLIN

## PURE ORANGE WINE

(VINUM AURANTII, B.P.), prepared in strict accordance with the Formula of the British Pharmacopoeia.

### Make your own Syphon Waters

It will pay you handsomely, and enable you to meet competition from every quarter.

PLANT TAKES UP VERY LITTLE SPACE.

EASY TO WORK.  
NO MESS. NO DANGER.

FULL INSTRUCTIONS GIVEN.  
JUST THINK OF IT! In ONE HOUR one man can make and fill over 70 Syphons, or 500 Codd's Bottles.

PLANT EASILY PAYS ITS OWN COST IN ONE SEASON.  
BEST POSSIBLE WATERS MADE.

These Machines may be had on Rental, or purchased outright, as preferred; or Rental on approval for purchase in three months.

SYPHONS. BOTTLES. BOXES.  
SYRUPS & EVERY REQUISITE SUPPLIED.

Get our ESSENCE LIST, we are making quite a Speciality of the Department.

	Cash Price.	Rental per Ann.
"HECLA," with Lever Pump, without Filler	£35 0s.	£9 9s.
Ditto ditto, including Filler	£45 10s.	£12 12s.
Ditto, with Wheel as illustrated, but without Filler	£42 10s.	£12 0s.
Ditto ditto, as illustrated, complete for Syphon or Codd's Bottle Filling	£52 15s.	£14 14s.

## VOLCANIC AERATION CO.

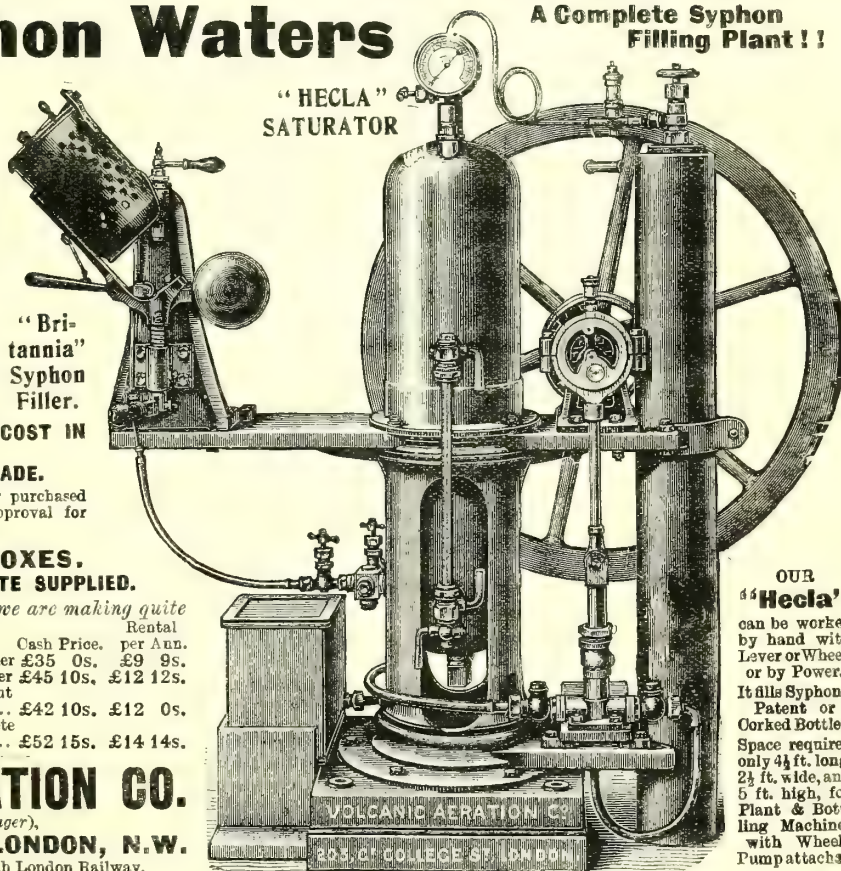
(J. H. VINCENT, Manager).

203c Gt. College St., LONDON, N.W.

Close to Camden Town Station, North London Railway.

A Complete Syphon Filling Plant !!

"HECLA" SATURATOR



OUR "Hecla" can be worked by hand with Lever or Wheel, or by Power. It fills Syphons, Patent or Corked Bottles. Space required only 4½ ft. long, 2½ ft. wide, and 5 ft. high, for Plant & Bottling Machines with Wheel Pump attachments.

Telegrams: "VANILLIN LONDON."

Telephone, 810 HOP.

The

# London Essence Co.

GEORGE STREET,  
CAMBERWELL GREEN,  
S.E.

SOLUBLE  
ESSENCES.

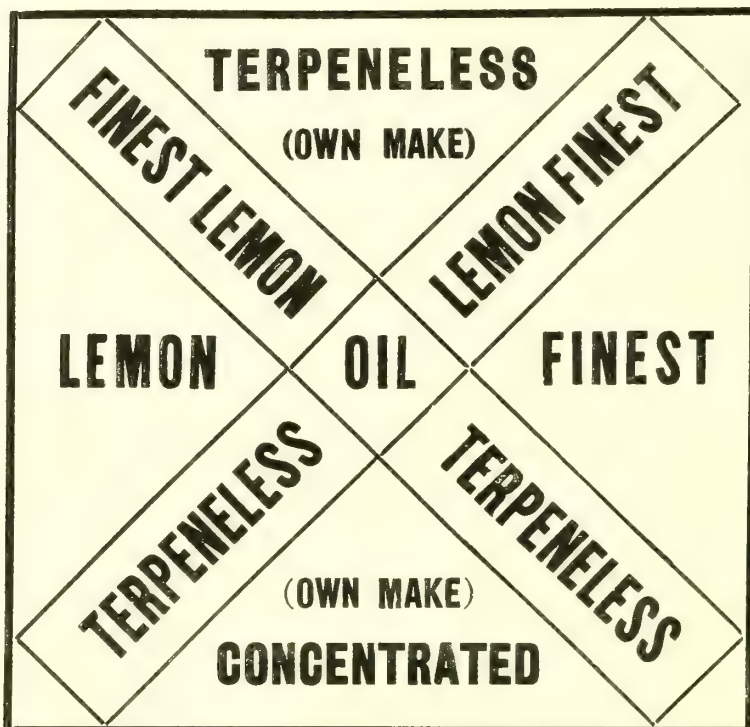
FRUIT  
ESSENCES.

Our Concentrated  
Terpeneless Oil of  
Lemon is guaran-  
teed to be made  
from pure Oil of  
Lemon only, and  
contains no

Lemon-Grass

Citrat,

as is frequently  
the case with many  
so-called Concen-  
trated and Ter-  
peneless Oils of-  
fered for Sale.



Write for Samples  
and Quotations.

We shall also be  
pleased to give any  
information re-  
quired as to the  
method of using  
our Terpeneless Oil  
of Lemon.

It is much more  
soluble than ordi-  
nary Oil Lemon,  
and will show a  
saving in cost.

## FINEST OIL OF LEMON

("LOFRESCO" BRAND), in Original Coppers and Bottles.

## OIL CLOVES, ENGLISH.

OWN DRAWING.

HIGHEST PER CENT. EUGENOL.

ESSENTIAL OILS ("LOFRESCO" BRAND) OF EVERY DESCRIPTION.



**TELEPHONE 68 DALSTON,**

OR

**WIRE**

**"PLAYFELLOW LONDON"**

**"PLAYFELLOW MANCHESTER"**

**"PLAYFELLOW NEWCASTLE-ON-TYNE"**

FOR

# **Carbonic Acid Gas**

**THE CARBONIC ACID GAS CO.**

**LEA BRIDGE ROAD, CLAPTON, LONDON, N.E.**

**POLLARD STREET EAST, ANCOATS, MANCHESTER.**

**SKINNERBURN ROAD, LOW ELSWICK, NEWCASTLE-ON-TYNE.**

SIX GOLD MEDALS and ONE SILVER  
MEDAL awarded.  
HIGHEST AWARD at CHICAGO.

# COLEMAN'S WINCARNIS

Is a delicious beverage and tonic made from  
Port Wine, Liebig's Extract of Meat, and  
Extract of Malt.

## WINCARNIS

*Is a Name Registered to prevent fraudulent imitations.*

## OVER SIX THOUSAND

Unsolicited Testimonials have been received from  
Medical Men.

*The following Important Testimonial has  
been received from Dr. FLETCHER:—*

Applecross, Ross-shire, N.B.,  
July 2nd, 1897.

DEAR SIRS,—Please forward quarter-of-a-dozen "Win-  
carnis" immediately, as my patient's supply is about done.

I trust there will be no delay, as he takes no other  
nourishment, and has been sustained and gained strength  
by "Wincarnis" for twelve weeks.

Yours faithfully,  
DUNCAN FLETCHER, L.R.C.P.

## WINCARNIS

Is sold by all Druggists, Wine Merchants, and Patent-medicine  
Vendors. Ask for Coleman's "Wincarnis," and see that  
the word "Wincarnis" is on the shoulder of the bottle.

Sold in Bottles, 2s. 9d. and 4s. 6d., everywhere.

SOLE MANUFACTURERS:

# COLEMAN & CO., LIMITED,

WINCARNIS WORKS,  
LOWER WESTWICK STREET, NORWICH,  
AND 24 CRUTCHED FRIARS, LONDON, E.C

*Sole Proprietors of Coleman's Crown Imperial Invalid Stout,  
and also Coleman's Crown Imperial Invalid Champagne,  
which is strongly recommended by the Medical Faculty.*

# St. Raphaël Quinquina.

TONIC WINE AND APPETISER.

FIXED RETAIL PRICE:

3/3 per Bottle. 1/9 per Half Bottle.

The LANCET, May 28, 1898:

"Of undoubted Tonic value."

.....

St. Raphaël Quinquina has an  
average Daily Sale of  
15,000 Litres.

.....

Wholesale Agents:

## BOWEN & MCKECHNIE,

CROSS STREET, FINSBURY, E.C.

IT WILL PAY YOU TO PUSH  
COOMBS'

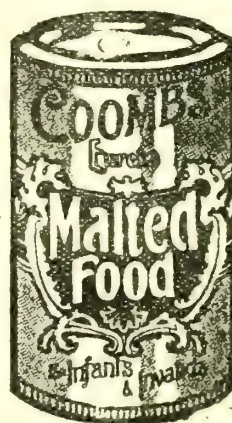
## MALTED FOOD

for Infants and Invalids.

AWARDS.

# 2

GOLD  
MEDALS.



Recom-  
mended  
by the  
Medical  
Faculty  
and  
Leading  
Analysts.

See  
Dr. Goodfellow's  
and  
Granville B.  
Sharpe's  
Reports.

Bears a good profit, and is only supplied to  
those who agree to sell at full advertised  
prices.

TERMS ON APPLICATION.

COOMBS' "EUREKA" AERATED FLOUR CO., LTD  
Lenton Boulevard, Nottingham, 8 & 8a Farringdon  
Road, London, E.C.



There are

# 3 REASONS WHY

“NONALTON” TONIC WINE should find a prominent place in *your* store.

**FIRST.**—“NONALTON” is a real good thing—appreciated and praised by patients and physicians wherever it's used.

**SECOND.**—“NONALTON” is in good demand—the public have faith in it, and when they ask for it they *won't* take anything else.

**THIRD.**—“NONALTON” puts a *good profit* in your till.

Let us put it this way.—When your Customer asks you for “*Nonalton,*” and you haven't it, your Customer simply goes straight to your competitor who can, and does, supply it. Who is likely to get the future patronage? You, who “don't keep it,” or the obliging competitor? It is all in *your* hands—our advertising is bringing the customers—*you* can handle the profits, if you've a mind to.

Consult your business sense, and place an order for

PINT BOTTLES  
19/6 per doz.  
Retail, 2/3 each.

## “NONALTON”

QUART BOTTLES.  
36/- per doz.  
Retail, 4/- each.

at once with your Wholesale House. We supply the printed matter, Showcards, &c.

**F. WRIGHT, MUNDY & CO.,** Dept. C.D., Merton Road, Kensington, **LONDON, W.**

SEE

# NEWBALL & MASON'S

## CIRCULAR

In Second Section of Insets, between pages 64 and 65, drawing attention to

# THE ORIGINAL

# EXTRACT OF HERBS.

**BRAND & CO.**  
LIMITED,  
THE ORIGINAL MANUFACTURERS OF  
**CONCENTRATED BEEF TEA,**  
**ESSENCE OF BEEF,**  
AND  
**SPECIALTIES FOR INVALIDS,**  
Beg to call the attention of Chemists to their  
NEW PREPARATION,  
**Nutrient Powder**  
**(FROM RAW MEAT).**

---

This article consists of powdered muscle fibre only, from which the moisture has been removed at a temperature below the coagulation point of the muscle proteids. It is sterilised and tasteless, and contains all the constituents of lean meat in an unaltered condition.

**One ounce of the Powder is equivalent in nutritive value to four ounces of Fresh Lean Meat.**

Its great dietetic importance to Invalids consists in the ease and completeness with which it can be digested, and in the fact that it can be assimilated with a minimum of effort upon the part of the digestive organs.

In the process of manufacture **nothing is removed except the water of the fresh meat, its taste and odour, and the tough, stringy and indigestible portion rejected in sifting.**

One to two ounces taken daily (equivalent to four or eight ounces of fresh lean meat) will suffice for the complete maintenance of the body-weight and healthy functions of an invalid person in a state of convalescence.

---

Prices on application to

**BRAND & CO., Limited,**  
Of Mayfair, W., and Mayfair Works, Vauxhall, LONDON, S.W.



# PLASMON

*Registered Trade Mark. Patented in the U.K. and Abroad.*

**PLASMON** is an absolutely pure, soluble milk albumen, free from all chemicals, and being tasteless and odourless is capable of being used in any and every form of food.

**PLASMON** replaces all other nitrogenous substances in the dietary of the healthy and of the weak, and of the aged and the young.

**PLASMON** is used in many of the principal Hospitals, and is prescribed by medical men throughout the country.

Descriptive literature will be forwarded on application.

## PRICES :

Packets, each about 1 lb., 2/6.

" "  $\frac{1}{2}$  lb., 1/4.

" "  $\frac{1}{4}$  lb., 9d.

**Plasmon Biscuits, Plain or Sweet.**

tins about 1 lb., 1/6.

" " lbs., 3/-.

**Plasmon Chocolate, at 3/- per lb.**

**THE PLASMON SYNDICATE LIM.**

56 Duke Street,

Grosvenor Square,

LONDON, W.

Retail Trade Discount 15 per cent.

On orders of £1 and upwards, carriage paid.

## Water Absolutely Free from Disease Germs

BY USING

# THE BERKEFELD FILTER

In Use in the Leading LONDON and PROVINCIAL HOSPITALS.

*Chemists will find these Filters a profitable line,  
and one they can confidently recommend  
to their customers.*

PLEASE REFER TO INSET ON PAGES 64 & 65.

**THE BERKEFELD FILTER CO., LIM.**  
121 Oxford Street, LONDON, W.

Contractors to H.M.'s Government for the supply of Filters for the use of the Troops  
in South Africa.

# LOFTHOUSE & SALTMER



Wholesale & Export Drug Merchants,  
MANUFACTURING CHEMISTS, **HULL,**

*Invite the Home and Colonial Trade to apply for the Agency for*

# LOSALL'S



**CHALYBEATE**

**SULPHUR**



(REGISTERED.)

# SALT.

Put up in enamelled Tins, yellow ground and black lettering.

AN UNIQUE AND CAPITAL SELLING LINE.

A sure preventive of BILIOUSNESS, RHEUMATISM, ECZEMA, & all Blood & Skin Diseases.

Retailed at face value, 6d. & 1/- Tins, and 1/- Bottles.

ON THE P.A.T.A. LIST, EACH AGENT ALSO PERSONALLY UNDER-  
TAKING NOT TO RETAIL BELOW FACE VALUE.

**SELLS READILY.**

*Neat Enamelled Metal Show Cards and also Large Posters supplied gratis.*

Leaves a clear Net Profit of over 70% on Lowest Net Trade Prices, 3/6 and 7/- doz. in Tins, and 7/6 doz. in Bottles, and is easier to sell, and more satisfactory to push, than ordinary Health Salts, because of its superior Medicinal Properties.

Apply—LOFTHOUSE & SALTMER, HULL, AND THE LONDON AGENTS, F. NEWBERY & SONS.

*If you want close, up-to-date Quotations for above or any other Drugs, Chemicals, or Pharmaceutical Preparations, don't fail to write to*

# LOFTHOUSE & SALTMER

**WHOLESALE DRUGGISTS, HULL.**



# SACCHARIN



**"TIGRESS BRAND."**



## ***Another Victory***

For the **ANGLO-CONTINENTAL CHEMICAL WORKS, LIMITED.**

---

On the 6th instant, Mr. Justice COZENS-HARDY dismissed, with costs, the action of the SACCHARIN CORPORATION v. ROBERT REITMEYER, Managing Director of the Anglo-Continental Chemical Works, Ltd.

His Lordship said :

**"In my judgment the Plaintiffs' (Saccharin Corporation's) action wholly fails, and I must dismiss it, with costs !"**

---

**THE ANGLO-CONTINENTAL CHEMICAL WORKS,**  
LIMITED,

1 & 2 Rangoon Street, Crutched Friars, LONDON, E.C.

And at **MANCHESTER.**

# R. J. FULLWOOD & BLAND'S

Estab. 114 Years.

Estab. 114 Years.

## OLEO BUTTER COLORINE

TRADE MARK.



A much-improved vegetable Butter Colour, manufactured from pure Annatto only.

Beware of imitations, and see that the capsule bears the above Trade Mark.

Sold in Jars — 1-gallon,  $\frac{1}{2}$ -gallon, quart, pint,  $\frac{1}{2}$ -pint, and  $\frac{1}{4}$ -pint. Also in Glass Bottles, 1/- and 6d. each, and in bulk.

## ESSENCE of RENNET

FOR MAKING JUNKETS, CHEESE CAKES, CURDS AND WHEY, &c.

Sold in Glass Bottles, 8-oz. 1/- and 4-oz. 6d. each, and in bulk.

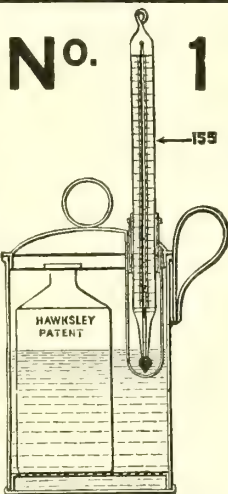
## JUNKET TABLETS.

Sold in Boxes, containing 2 dozen tubes. Each tube contains 20 tablets, sufficient to make 20 quarts of Junket. 7/6 per Box net.

Samples and further particulars supplied on application to our sole address—

**STEAM ANNATTO WORKS, 31 BEVENDEN STREET, HOXTON, LONDON.**

HAWKSLEY'S

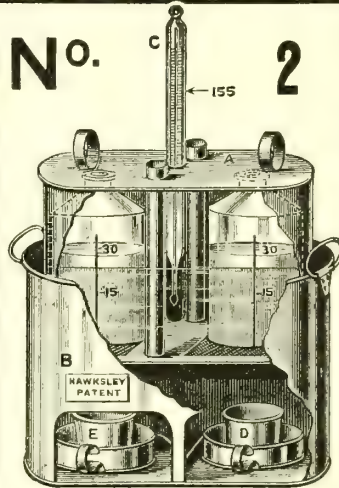


No. 1.

Price, in Box with EXTRA bottle, 1 pint, 10/6;  $\frac{1}{2}$  pint, 12/6.

Nos. 1 and 2.—Simple forms for sterilizing in bulk. For Children and Invalids, for Family use and Twins.

PATENT MILK



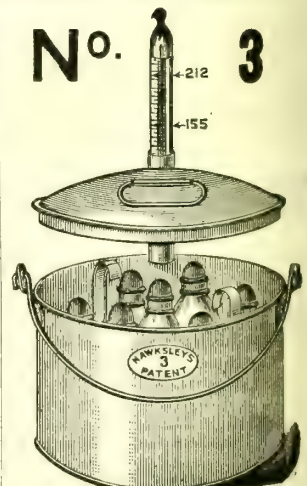
No. 2.

Price, in Box (of 2 bottle apparatus) with Spirit Stove and extra bottle, 25/-.

May be used on a Gas or Oil Stove or an Open Fire.

Illustrated Pamphlets forwarded on application.

STERILIZERS.



No. 3.

7 bottles, 15/-; 10 bottles, 21/-.

With Tripod and Spirit Lamp, 3/- and 3/6 extra.

No. 3 is a modification of Dr. Budin's method of feeding Infants, suggested in the *British Medical Journal*, Dec. 7th, where each dose of food is in a separate bottle. One operation being sufficient for one day's consumption.

**No. 4.**—Same arrangement as No. 3, with 7 larger (8-oz.) bottles. Price £1 1s.

May be had through Barclay & Son, Lim.; Burgoyne, Burbidges & Co.; Edwards & Son; Gilbertson & Sons; Lynch & Co.; Mace & Haldane; Maw, Son & Thompson; May, Roberts & Co.; F. Newbery & Son; Sanger & Sons; Wm. Toogood; and others; or direct from—

**HAWKSLEY, SOLE MAKER AND PATENTEE, LONDON.**

Sedley Place, 357 Oxford Street,



# WARRICK BROTHERS, LOZENGE MAKERS.

PORTPOOL LANE, LONDON, E.C.

## PLAIN AND DECORATED METALLIC BOXES,

**LEVER TOP & SLIP LID CANISTERS.**

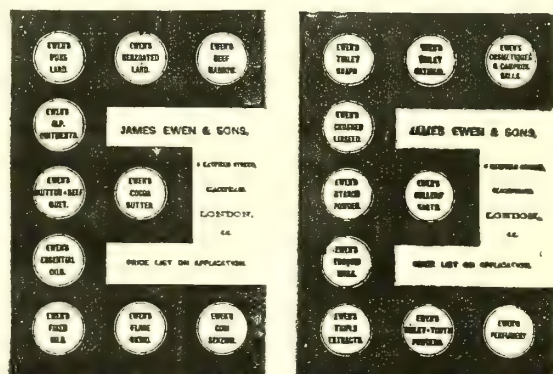
For Health Salines, Baking Powders, Tea, Coffee, Sweets,  
Biscuits, &c.

### Soap & Disinfecting Powder Canisters.

## SHELF STRIPS AND ADVERTISING TABLETS.

JOHN BENTLEY, BRIDGWATER MILL, MANCHESTER.  
RODNEY STREET.

2) **RODNEY STREET,**  
*Prices and Samples on application.*



# Hunyadi János

*The Prices of the above (to the Trade) have been fixed by the Proprietor, Mr. ANDREAS SAXLEHNER, at—*

<b>22/6</b>	per case of 25 large Bottles;	<b>35/-</b>	per case of 50 half Bottles; for Single Cases.	} <i>NET CASH.</i>
<b>21/-</b>	" " "	<b>32/-</b>	" " " ; for 5 Case lots.	

**INGRAM & ROYLE, LTD.** { LONDON: East Paul's Wharf, 26 Up. Thames St., E.C.  
LIVERPOOL: 19 South John Street.  
BRISTOL: Bath Bridge.

**Price List of all Natural Mineral Waters, Salts, &c., on application.**

## A PACKET THAT SELLS.

# TOWER TEA.

### String-tied Paper Packet.

From **1/4** per lb.

### Airtight Paper Bag.

From **1/2** per lb.

**Superior Lead Packet.**

From **1/8** per lb.

**GOOD PROFIT TO THE RETAILER.**

SEND FOR SAMPLES AND NEW PRICE LIST.

**TOWER TEA, LIMITED, 71 EASTCHEAP, LONDON, E.C.**



# ABSOLUTELY DIRECT BRITISH IMPORTS OF SPONGES.

Telegraphic Address—  
"CRESSWELL  
LONDON."

**WORLD'S  
HEAD-QUARTERS  
for SPONGES.**

Telephone—  
No. 1432 HOLBORN.

## CRESSWELL BROTHERS & SCHMITZ,

*Sponge Importers, Exporters & Merchants,  
and Chamois Leather Dressers,*

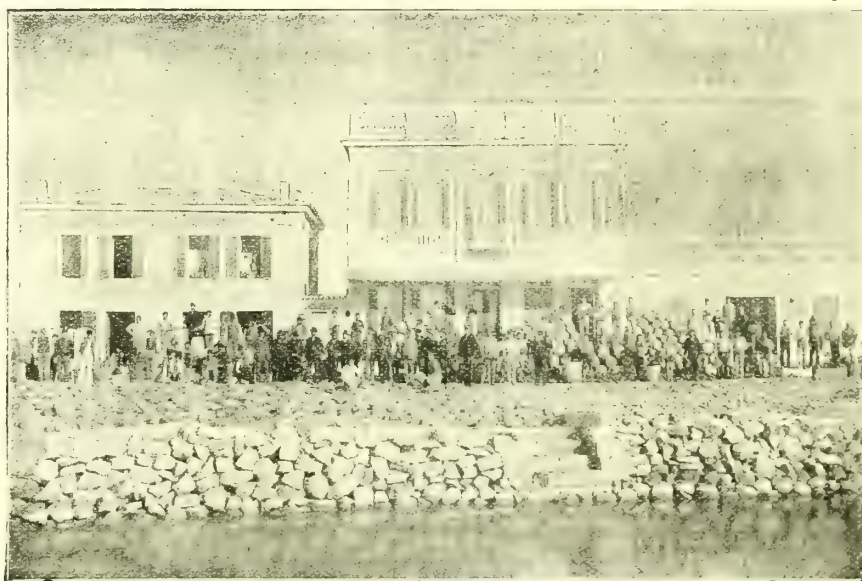
**1 & 2  
18 & 19 } Red Lion Sq., London, W.C.**

AND AT 175 RUE DU TEMPLE, PARIS.



8  
Prize  
Medals.

Greek Cross  
of  
Knighthood.



The only  
Premises  
owned by  
an English  
firm at the  
Sponge  
Fisheries.



CRESSWELL BROTHERS & SCHMITZ'S SPONGE WAREHOUSES AT ÆGINA GREECE.

This Reproduction of a Photo, in which one of our Partners (Mr. A. G. Cresswell) and our Resident Manager (Mr. G. H. R. Brown) appear, is a substantiation of our claim that we are at the Fountain Head of the Trade. The processes of sorting, trimming, baling, and casing, in which eighty-one men are employed, are shown in the picture.

Buyers are shown at our Warehouses the largest stock in the world, consisting of the genuine original cases. They can see at a glance an immense and unequalled assortment, and in making their selections from it they are doing better than they can possibly do elsewhere.



# WORLD'S HEADQUARTERS for SPONGES

## GRESSWELL BROS. & SCHMITZ,

1, 2, 18 & 19 RED LION SQUARE, LONDON, W.C.

### Sponge Fishing — AND — British Enterprise.

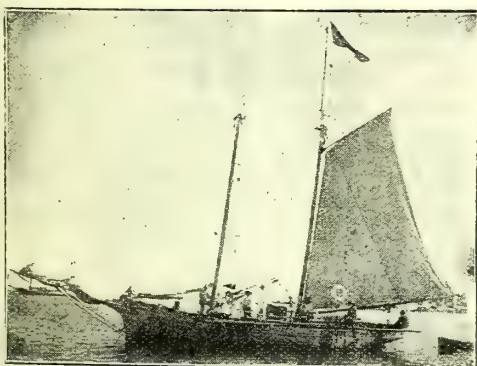
HOW SPONGES ARE OBTAINED.

HOW THE PICK OF THE SEASON  
IS SECURED . . . . .

HOW AN ENGLISH FIRM SECURES  
DIRECT SUPPLIES. . . . .

GRESSWELL BROTHERS and SCHMITZ

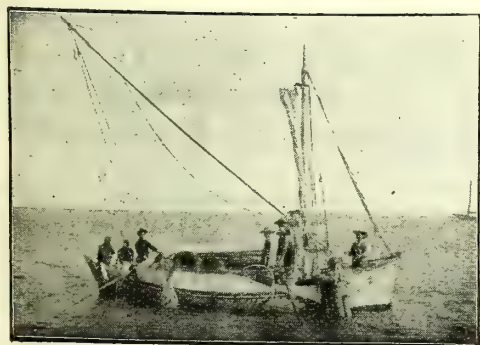
Are the only firm who fish Sponges with their own divers and boats, and collect them by their own Steamer, prepare and pack them for the Markets of the World, and distribute them directly to the Trade, unencumbered by intermediate profits.



A Sponge Schooner belonging to Cresswell Brothers & Schmitz in attendance on their Sponge Divers.



Cresswell Brothers & Schmitz's Steamer "Lady Downshire" leaving for Sponge Fishing Grounds with their Mediterranean Staff on board.



A Sponge Diving Boat belonging to Cresswell Brothers & Schmitz, showing Deep-sea Diver rising to the surface.



A Crew of Sponge Divers with their Captain in the employ of Cresswell Brothers & Schmitz, showing their catch ready packed for shipment to London.

"Firms of Messrs. Cresswell Brothers & Schmitz's spirit will do much to maintain British commercial supremacy."—  
THE BRITISH AND COLONIAL DRUGGIST.



# CRESSWELL'S

**THE WORLD'S  
HEADQUARTERS FOR**

**SPONGES.**

A visit to our vast Warehouses where Stocks, unequalled in extent, variety and value, can always be inspected, will convince Buyers that they must place their orders with us if they consult their best interests.

## Select Sponges for Chemists' Trade.

The following Goods are the Best Value in the Trade:—

### SPONGES IN ORIGINAL CASES.

ALSO IN HALF AND QUARTER CASES.

**Genuine unbleached Goods as Imported.**

#### HONEYCOMB FINE TURKEY AND BROWN TURKEY

At following average prices per piece:—

1 1/4, 3d., 4d., 6d., 7d., 8d., 9d., 10d., 1/-, 1 1/2, 1/3, 1 1/4, 1/6, 1/8, 1/9, 2/-, 2/3, 2/8, 2/9, 3/-, 3/3, 3/6, 3/9, 4/-, 4/6, 5/-, 5/6, 7/6, and upwards.

In 1st, 2nd, and 3rd qualities. Full details sent on application.

REPACKED CASES to contain BUYERS' own Requirements.

### SPONGES in SMALL PACKAGES.

**Fine TURKEY, Fine EGYPTIAN & HONEYCOMB,  
1st, 2nd, and 3rd Qualities.**

BLEACHED or UNBLEACHED. (State which in ordering.) On Strings of 1 dozen pieces, or loose in Bags. At per dozen:—

2/- 3/- 4/- 6/- 9/- 12/- 15/- 18/- 24/- 30/- 36/- 42/- 48/- 54/- 60/- 66/- 72/-

### BLEACHED CUBAN.

At per string or dozen.

**WOOL, GRASS, YELLOW AND FINE.**

1/- 2/- 3/- 4/- 6/- 9/- 12/-

To Buyers of original Cases, or over £5 worth of loose goods, and who wish to make a good display, O. B. & S. are willing to present a Photograph of Sponge Fishing, 15 in. by 10 1/4 in., together with Printed Show Bills. Mention when ordering.

**LOOFAHS.**—Direct importation, consisting of best and largest assortment ever received by one house. Send for Price List. Original halves (compressed), or small quantities (sent on duty). Chamouis Leather at Leather Dressers' prices. Quality guaranteed.

## CRESSWELL'S GREAT NOVELTY FOR WINDOW DISPLAYS.

Our Patent Sponge Show Figures received the distinction of being voted the best Advertising Novelty at the recent Chemists' Exhibition.

Terms of Loan to Purchasers of our Goods can be had on application.

### CARDED SPONGES.

Fresh line, mounted on handsome blue card of new design. We originated the Carding of Sponges, and continue to supply the best goods on the market.

#### HONEYCOMB and TURKEY.

Retail.	Per Gross.	Retail.	Per Gross.
School, 1 1/4, 2 doz. on card ..	3/6	Toilet, 1/8, 1 doz. on card ..	12/-
1d., 1 " " " " " " " "	7/-	" 2d., 1 " " " " " " " "	16/-
Toilet, 2d., 1 " " " " " " " "	14/-	" 2/6, 1 " " " " " " " "	210/-
" 3d., 1 " " " " " " " "	21/-	" 3/-, 1 " " " " " " " "	21/- doz.
" 4d., 1 " " " " " " " "	28/-	Bath, 3/6, 1 " " " " " " " "	24/6 "
" 6d., 1 " " " " " " " "	42/-	" 4/-, 1 " " " " " " " "	28/- "
" 1/-, 1 " " " " " " " "	84/-		

### CARDED CUBAN SPONGES.

(Larger for the money than Honeycomb or Turkey.)

Retail.	Per Gross.	Retail.	Per Gross.
School, 1 1/4, 2 doz. on card ..	3/-	Toilet, 4d., 1 doz. on card ..	24/-
1d., 1 " " " " " " " "	6/-	" 6d., 1 " " " " " " " "	36/-
Toilet, 2d., 1 " " " " " " " "	12/-	" 1/-, 1 " " " " " " " "	72/-
" 3d., 1 " " " " " " " "	18/-		

### NEW FINE DOMESTIC CARDED SPONGES.

Larger than Turkey. Soft in use.

Retail.	Per Gross.	Retail.	Per Gross.
Toilet, 3d., 1 doz. on card ..	18/-	Toilet, 1/-, 1 doz. on Card ..	72/-
4d., 1 " " " " " " " "	24/-	" 1/6, 1 " " " " " " " "	108/-
" 6d., 1 " " " " " " " "	36/-	" 2/-, 1 " " " " " " " "	144/-
" 9d., 1 " " " " " " " "	54/-	" 2/6, 1 " " " " " " " "	180/-

Special Quotations for Wholesale Quantities of Carded Goods.



# GRESSWELL'S

They Stand at the Head.

# SPONGES

The Standard of December 21, 1895, says:—"By far the most important house in the trade to-day . . . whose operations have made London the chief sponge market of the world. They have established an extensive fishing station and factory on the island of Ægina, where they employ a whole fleet of Greek boats to fish in different parts of the Mediterranean."

## A GREAT SUCCESS! SPONGES IN PRETTY COUNTER BOXES.

### THE NEW FINE ANCLOTE SPONGE.

This is a very choice quality of Florida, and is the very best of all the cheaper grades of Sponge. We have secured the entire produce of the Fishery, and are now offering same at exceptionally low prices.



**FINE ANCLOTE** (Turkey Quality). Bleached or Unbleached.

IN STRONG CARDBOARD SHOW BOXES. (See Illustration.)

6	24	21	24	24 Pieces.
d.	4d.	6d.	9d.	1/- each.

**FINE ANCLOTE CUT SHAPES**, on Strings of 1 doz. ea.

6/-	8/-	10/-	12/-	18/-	24/-
-----	-----	------	------	------	------

Chemists who have not yet stocked these Seable and Profitable Lines should write at once for Sample Boxes.

Cresswell Brothers and Schmitz, the great firm of Sponge Importers, in Red Lion Square,"

R. R. Lydekker, F.R.S., in "Knowledge" for July, 1899.

### FINE TURKEY SOLIDS. IN BEAUTIFUL COUNTER BOXES.



(Wholesale.)		Pieces	Each	(Wholesale.)		Pieces	Each
Box containing	48	at	1d.	Box containing	12	at	1/6
"	"	24	" 2d.	"	"	12	" 2/-
"	"	24	" 3d.	"	"	12	" 2/6
"	"	24	" 4d.	"	"	12	" 3/-
"	"	24	" 6d.	"	"	12	" 3/6
"	"	12	" 9d.	"	"	6	" 4/6
"	"	12	" 1/-	"	"	6	" 5/6

### FINE CUBAN SOLIDS.

IN HANDSOME COUNTER BOXES.

24	12	12	12	12	12	12	12	Pieces.
4d.	1½d.	2½d.	3½d.	4½d.	6d.	9d.	1s.	each.



**LOWEST PRICES & CHOICEST SELECTIONS IN THE TRADE. WRITE FOR ILLUSTRATED PRICE LIST.**

Terms: 2½% Discount for Cash, or Net at Three Months.

**GRESSWELL BROS. & SCHMITZ,** Sponge Importers, 1 & 2 Red Lion Sq., London, W.C.  
Exporters & Merchants,

# S. Sainsbury's

Established over

Half a Century.

Apply direct for New Home Terms

and for

SPECIAL SHIPPING and BONDED TERMS.



PLEASE NOTE

CHANGE OF ADDRESS,

LATE OF

176 &amp; 177 STRAND, LONDON, W.C.

## Lavender Water

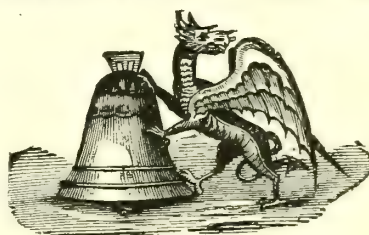
New Address—

136 REGENT STREET, LONDON, W.

## CORBYN, STACEY & COMPANY, LTD.

Wholesale & Export Druggists,  
MANUFACTURING PHARMACEUTICAL AND ANALYTICAL CHEMISTS.

ESTABLISHED PRIOR TO THE



(TRADE MARK)

GREAT FIRE OF LONDON.

MANUFACTURERS OF

EXT. COLOC. CO. CORBYN, LIQUOR CINCHONÆ RUB. CORBYN,  
GYNOCARDIC ACID, & CHAULMOOGRA PREPARATIONS.

BROMO CAFFEINE (Effervescent K. &amp; M.).

CALAMINE (Corbyn) No. 3, and other Calamines from Native Ore.

Sole Agents for the United Kingdom for LIEBREICH'S PEPSINE ESSENCE.

## 300 HIGH HOLBORN, LONDON, W.C.

City Address: 96 &amp; 98 LEADENHALL STREET, LONDON, E.C.



# JEANCARD, GAZAN & DOUMIN

## 13 St. Mary Axe, LONDON, E.C.

Telegrams: "Jeaneard London."]

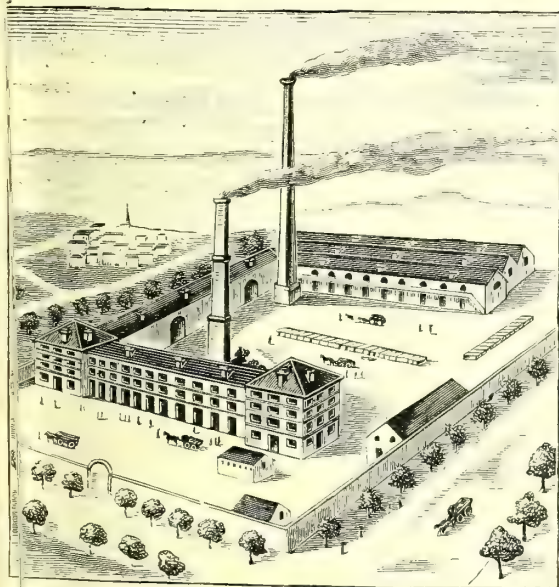
[Telephone No.: 1,955 Avenue.

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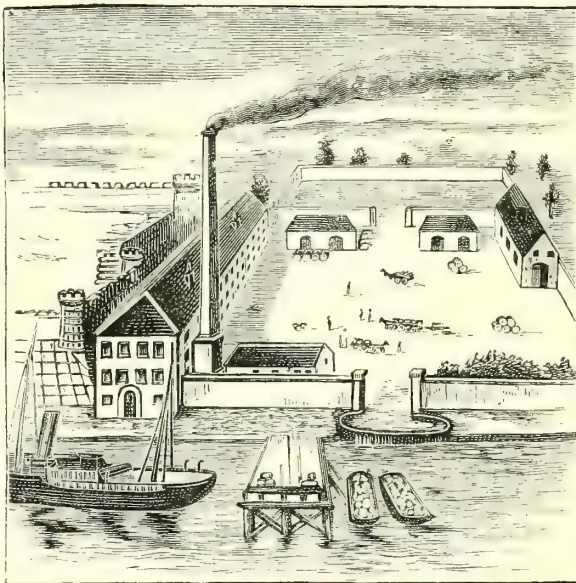
# PURE

# Spanish Juice

## Blocks and Sticks.



WORKS IN FRANCE.



WORKS IN SPAIN.

# 'MEQUINENZANA' BRAND

(REGISTERED.)

SOLE CONSIGNEES.

**STOCKS KEPT IN LONDON.**

# JEANCARD, GAZAN & DOUMIN

*Distillers and Importers,*



Distillery: Des Vallergues,  
CANNES (France).

Works: De la Boca,  
CANNES (France).

Distillery at KEZANLIK  
(Bulgaria), for Otto de Rose.



**13 St. Mary Axe,**

**LONDON, E.C.**

Trade

J.G.D.

Mark

Telegrams: "JEANCARD LONDON."

Telephone Number, 1,955 Avenue.

## **PURE NATURAL PERFUMES**

Liquid and Entirely Soluble in  
Alcohol.

**PERFECTED PROCESS.**

WRITE FOR PARTICULARS.



# JEANCARD, GAZAN & DOUMIN

***Distillers and Importers,***

✠  
Distillery: Des Vallergues,  
CANNES (France).

Works: De la Boca,  
CANNES (France).

Distillery at KEZANLIK  
(Bulgaria), for Otto de Rose.



**13 St. Mary Axe,**

**LONDON, E.C.**

Trade



Mark

Telegrams: "JEANCARD LONDON."

Telephone Number, 1,955 Avenue.

---

**WHOLESALE ONLY.**

## **ESSENTIAL OILS.**

**MUSK, CIVET, OTTO ROSE, AMBERGRIS.**

Sicilian Oils: Bergamot, Lemon, Sweet Orange, &c.

**SPANISH JUICE**—Blocks and Sticks.

***VANILLOES (direct importation).***

**SPECIALITIES, FLORAL EXTRACTS, &c.**

SYNTHETIC PRODUCTS AND SPECIAL COMPOSITIONS FOR SOAP MAKING.

**VANILLINE, ETC.**

~~~~~  
**Write for Price List and Samples.**

**To Home and Colonial Buyers.**

**For**

# **PERFUMES.**

**French and other Essential Oils,**  
NEROLI, GERANIUM, OTTO de ROSE, LAVENDER,  
SPIKE, THYME, BERGAMOTTE, &c.

**Pomades and Perfumed Oils**  
of the Highest Concentration.

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**SPECIALITIES.**

## **FINEST QUADRUPLE EXTRACTS**

of Inimitable and Lasting Fragrance.

SPURWAY et CIE. are the originators of **MINERAL OILS PERFUMED with NATURAL FLOWERS** by their special process.

Our latest production is

## **NEAPOLITAN VIOLETS,**

And we believe we are justified in saying this is the Sweetest and most Lasting Perfume ever put on the market.

**If you want to make a Speciality we know of no Perfume more suitable.**

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**SPURWAY et CIE., Perfume Manufacturers & Distillers,**  
**CANNES, GRASSE, FRANCE.**

ESTABLISHED 1825.

**GOLD MEDALS—Philadelphia, 1876; Nice, 1884; Cannes, Grasse, 1893.**

**LONDON DEPOT: 184 SHAFTESBURY AVENUE, W.C.**

*Tel.grams—*"NEROLI LONDON." "MUNWIN NEW YORK." "SPURWAY LEIPZIG." "SPURWAY CANNES."

**WE INVITE CORRESPONDENCE. SAMPLES ON DEMAND.**



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The Undersigned can offer to  
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**SEE PRICE LISTS.**

Special Quotations for Quantity.

**EVANS, SONS & CO.**  
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EVANS, LESCHER & WEBB, EVANS AND SONS, LD.  
London. Canada & United States.

# Perfumes.

As old-established Perfume Distillers we offer  
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## Floral Extracts

in glass-stoppered bottles or in tins on  
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Essential Oils, Perfumed Oils and  
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Guaranteed pure and the finest on the market.

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**Claude Raynaud & Cie.,**

Grasse, France,

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TO WHOLESALE AND EXPORT TRADES.

**W. RANSOM & SON**  
(ESTABLISHED HALF A CENTURY),  
MANUFACTURING PHARMACEUTICAL CHEMISTS,  
Distillers of Essential Oils and Cultivators of Medicinal Plants,  
**HITCHIN, near LONDON.**

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SOLID & LIQUID EXTRACTS.

EXPRESSED JUICES.

ESSENTIAL OIL OF LAVENDER.

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Medicinal Tinctures and Spirits prepared with Pure British Spirit supplied in Bond for Export.

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**OKELL'S ORIGINAL  
MONA BOUQUET**

(First introduced by the late JOSEPH OKELL).

Registered Trade Mark, "DOUGLAS PIER."

The most popular and best-selling perfume in the market.  
Retail Prices, 1/-, 1/9, 3/6, 6/-, 7/6, 10/6 per Bottle.

**ALSO 3d. SAMPLE BOTTLES.**

Shippers and Wholesale Buyers supplied on the best terms by  
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**BRECKNELL'S** PRIZE MEDAL

Recommended by  
Eminent Medical Men.

**SKIN**

Unscented,  
yet  
Sweet as a Rose.

Although low in price, it ranks with high-class  
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**SOAP.**

The longer it is kept the more it improves and increases in value.  
LIBERAL TERMS TO THE TRADE.

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ESTABLISHED 1862.

Established 1833.

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*Farm & Distillery*  
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Distillers of the  
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**WHOLESALE • TRADE • ONLY**

Manufacturers of  
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 (Commonly sold  
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**MEDICINAL PLANTS**  
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SCAMMONY RESIN, ALOIN,  
 ALCOHOLIC EXTRACTS OF BELLADONNA LEAVES & ROOT,  
 ACONITE ROOT, NUX VOMICA, &c.

Telephone No. 1158, LONDON WALL.



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The Undersigned can offer to  
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SEE PRICE LISTS.

Special Quotations for Quantity.

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EVANS, LESCHER & WEBB, EVANS AND SONS, LD.  
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## EAU DE COLOGNE.

S. A. F. No. 84. Reputed to be the  
finest Eau de Cologne at the price,  
viz.: 2-oz., 5/6 per doz.; 4-oz.,  
10/- per doz.

## FREEMAN'S PERFUMES

Exquisite in fragrance, and pre-  
pared by a special process, they are  
guaranteed to keep in any climate.  
A large assortment of cut-glass  
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Carriage Paid on £2 to any Station  
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Estd. 1757. **GRASSE.**

MANUFACTURERS OF

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For Perfumers and  
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VIZ.

**ESSENTIAL OILS,  
FLORAL WATERS,  
CONCRETE ESSENCES,  
POMADES,  
PERFUMED OILS.**

**STOCK IN LONDON.**

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# EAU DE COLOGNE

OF THE MOST ANCIENT DISTILLER,

## JOHANN MARIA FARINA,

**Opposite the Jülichs Place, COLOGNE.**

ESTABLISHED A.D. 1709.

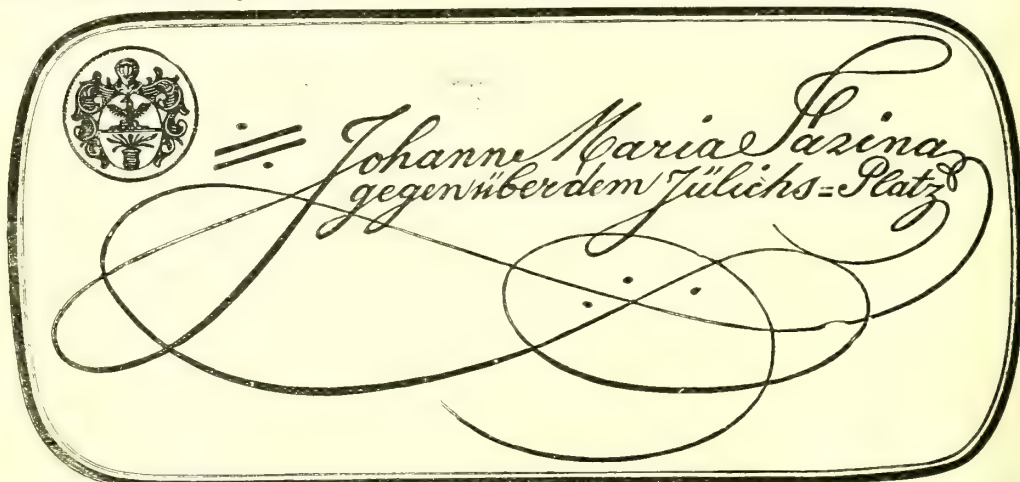
PRIZE MEDALS: LONDON, 1851 & 1862; OPORTO, 1865; PARIS, 1855 & 1867; VIENNA, 1873.

By Appointment, Sole Purveyor to Her Most Gracious Majesty Victoria, Queen of Great Britain and Ireland and Empress of India; Their Royal Highnesses the Prince and Princess of Wales.



Their Majesties William II., Emperor of Germany and King of Prussia; Francis Joseph I., Emperor of Austria; Humbert I., King of Italy; Albert, King of Saxony; Christian IX., King of Denmark; The Queen Regent of the Netherlands, &c., &c., &c.

I have the pleasure to hand you my Price List at foot, and would call your special attention to the facsimile of my Label as under. I have instituted thirteen suits in the High Court of Chancery for the protection of my Trade Mark, all of which have been decided in my favour.



All similar Labels being more or less imitations of the same, I shall proceed as before against all persons selling or exposing for sale any such imitations.

I only prepare one quality of Eau de Cologne. This quality never varies in the slightest degree, and there has not been the smallest change in the manufacture since the year 1709, when it was invented by my ancestor.

The superiority of my Eau de Cologne having been proved to the public by the above-mentioned highest distinctions, I have not taken part in any Exhibition since 1873.

\* Orders equal to at least 12 dozen short bottles will be promptly executed at 13s. 6d. per dozen, against my bill drawn at three months from the date of invoice, delivered free on board the export ship, at Rotterdam, Antwerp, Hamburg, or Bremen, no charge being made for the case and packing, but insurance charged extra. 10 per cent. discount is allowed for orders equal to at least 100 dozen, but on no smaller quantities.

I may add that, as I do not draw on the Colonies, all Orders must be accompanied by a credit on some London House, or permission to draw on same at three months.

The goods can also be shipped in transit through London at a very small additional expense, full particulars of which may be obtained of my Sole Agents for Great Britain and Ireland:

**MESSRS. J. & R. McCracken, No. 38 Queen Street, Cannon Street, LONDON, E.C.**

The following are the sizes of my bottles:

|                                |                       |                    |                      |
|--------------------------------|-----------------------|--------------------|----------------------|
| No. 00. Small Green Flasks     | } as per figure plate | .. .. . 24 bottles | } to one dozen .. .. |
| .. 0. Small White Bottles      |                       | .. .. . 24 ..      |                      |
| .. 1. Long Green Flasks        |                       | .. .. . 12 ..      |                      |
| .. 2. Short White Bottles      |                       | .. .. . 12 ..      |                      |
| .. 3. Double ditto             |                       | .. .. . 6 ..       |                      |
| .. 4. Wickered Bottles (small) |                       | .. .. . 8 ..       |                      |
| .. 5. ditto (medium)           |                       | .. .. . 4 ..       |                      |
| .. 6. ditto (large)            |                       | .. .. . 2 ..       |                      |

**13/6**

\* F.O.B. Continental Ports as above.

COLOGNE.

JOHANN MARIA FARINA,  
Opposite the Jülichs Platz.



# G.B. KENT & SONS'

BRUSHES

LEATHERS

TOILET  
BRUSHES

TOOTH  
BRUSHES

MIRRORS

HAIR BRUSHES

CLOTH  
BRUSHES

SHAVING BRUSHES

WHOLESALE

HAIR BROOMS

BASS BROOMS

GROUND BRUSHES

EXPORT



NEW PREMISES, FARRINGTON ROAD

SPONGES

SASH TOOLS

HOUSEHOLD  
BRUSHES

STABLE  
BRUSHES

SUNDRIES

SHOE BRUSHES

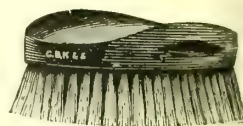
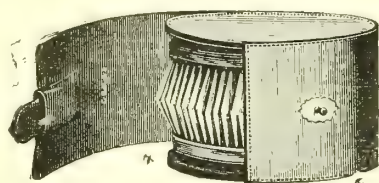
PAINTING  
BRUSHES

BEST

# BRITISH BRUSHES



# G. B. KENT & SONS', LTD.

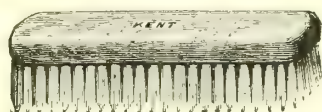
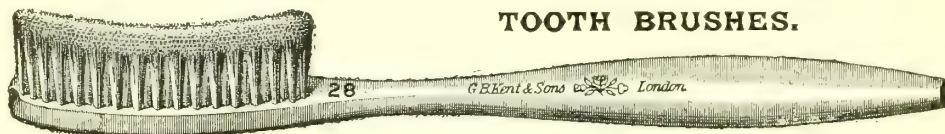


*Facsimile of Imprint on Best Quality Tooth Brushes.*

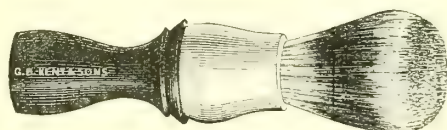
*G. B. KENT & SONS  
LONDON*

*Marks of Tooth Brushes—  
"Bee," the highest  
quality manufacture.  
"Crown,"  
Imperial quality.  
"ELEPHANT," "STAR,"  
"SHAMROCK."*

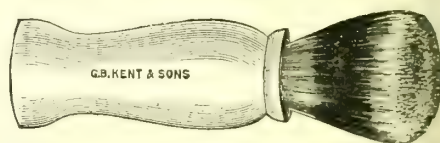
## TOOTH BRUSHES.



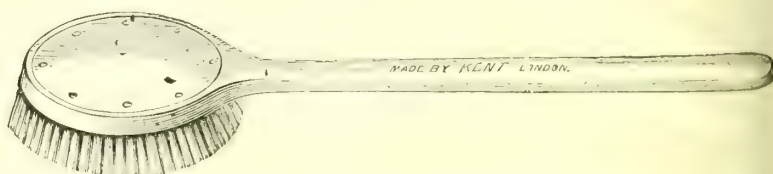
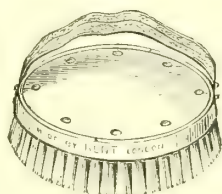
## NAIL BRUSHES.



## SHAVING BRUSHES.



## BATH BRUSHES.



Also CLOTH, BILLIARD, CRUMB, &c., BRUSHES.

Also STABLE and HOUSEHOLD and PAINTERS' BRUSHES.

PROPRIETORS OF JOHN COSNELL & CO.'S TOILET BRUSHWARE & F. R. FRINNEBY & SON'S PAINTING BRUSHWARE.

IMPORTERS AND DRESSERS OF SPONGES OF EVERY DESCRIPTION.



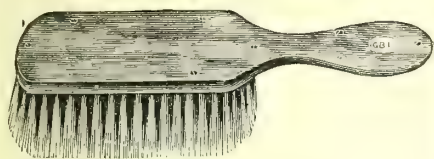
Illustrated Catalogue, January, 1899, containing 68 pages, forwarded by Post on application.

# BEST BRITISH BRUSHES.

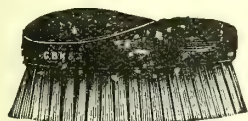


# G. B. KENT & SONS', LTD.

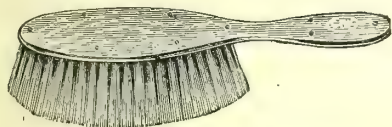
## SELECTED ILLUSTRATIONS OF HAIR BRUSHES.



No. 512.



E 162.



No. 587.



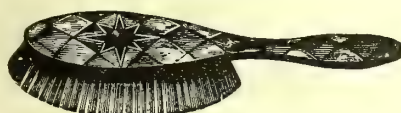
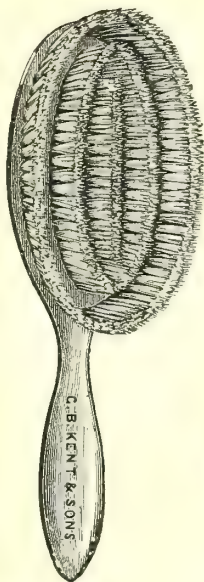
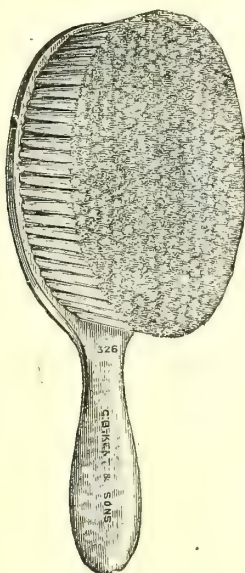
No. 562.



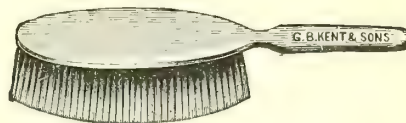
No. 699.



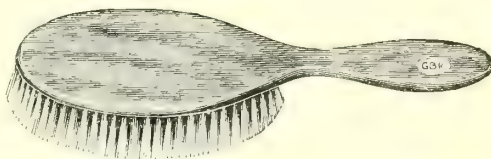
Baby Brush.

No. PLS 636.  
Pearl Veneered, Star Centre.No. 557.  
Ladies' Combing  
Brush.

No. 323.



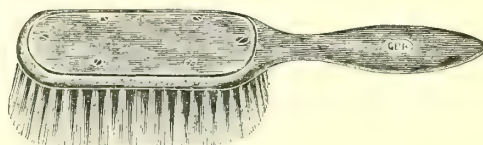
No. 666.



No. 961.



No. 444.



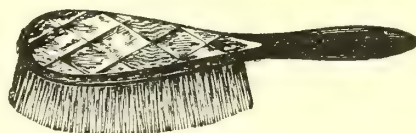
No. 497.



No. 26.



E 316.

No. SP 619.  
Shell and Pearl Veneered.

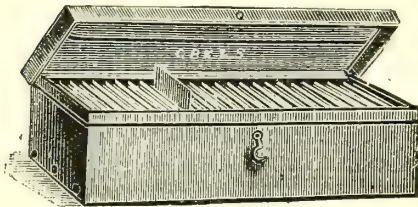
# BEST BRITISH BRUSHES.



# BEST BRITISH BRUSHES

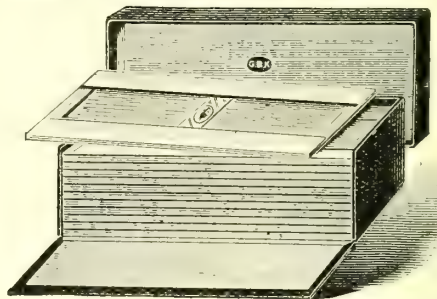
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Manufactured in London by  
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**KENT'S LANTERN-SLIDE BOX.**

To hold 18, 25, 50, 60, and 100 Slides.



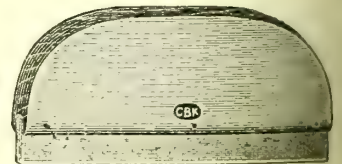
**KENT'S MICROSCOPIC SLIDE BOX.**



**KENT'S UNTONED PRINT CASE.**

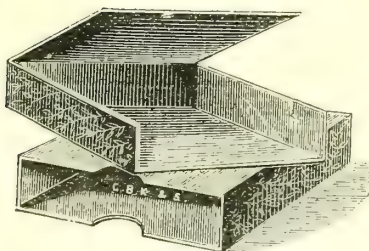


**KENT'S FILM NEGATIVE STORAGE ALBUM.**



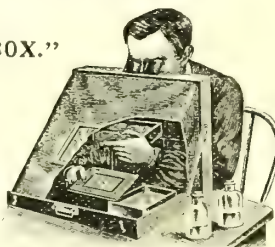
**KENT'S RUBBER SQUEEGEE.**

## THE "DEVELO BOX."

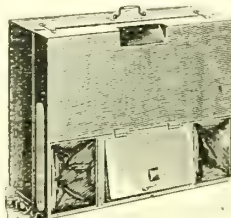


**KENT'S NEGATIVE STORING BOX.**

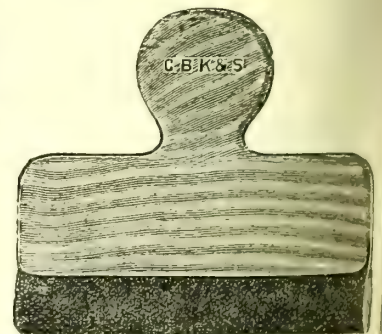
Convenient  
and  
Compact  
Substitute  
for a  
Dark Room.



OPEN FOR USE.



CLOSED FOR TRAVELLING.



**KENT'S DRY-PLATE DUSTER.**

Full Wholesale Catalogue sent on Application to  
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Telephone No. 966 Bank.



Telegrams: "Outbalance London."

Established 1862.

# SPONGES



An extensive stock of every description. Sponges in original cases, as imported. Sponges on cards, strings, and packed to suit the requirements of all buyers.

**TO SHIPPERS.**—All inquiries receive immediate attention, and all orders are executed under the guidance of an expert.

**JOHN PHILLIPS & SONS,**

**DIRECT IMPORTERS,**

**York Road, City Road, LONDON, E.C.**

(By City Road Bridge.)

# £100.

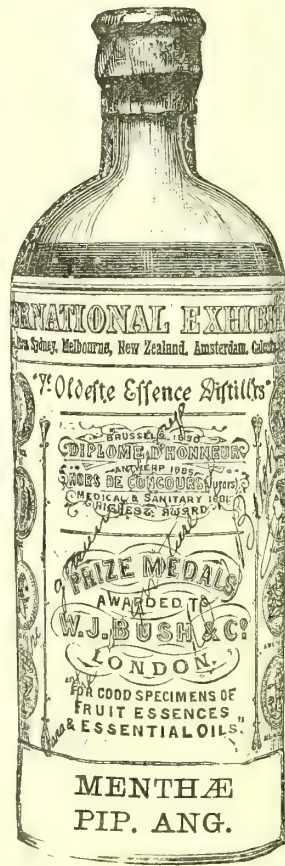
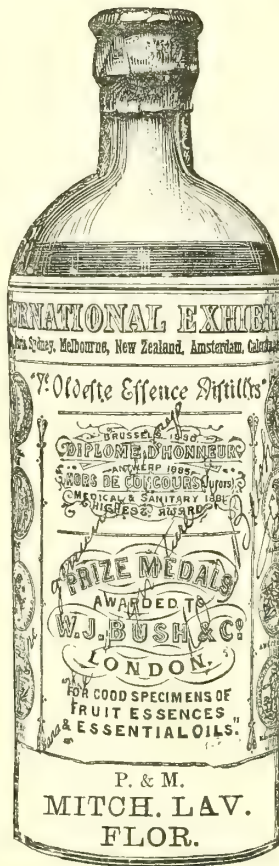
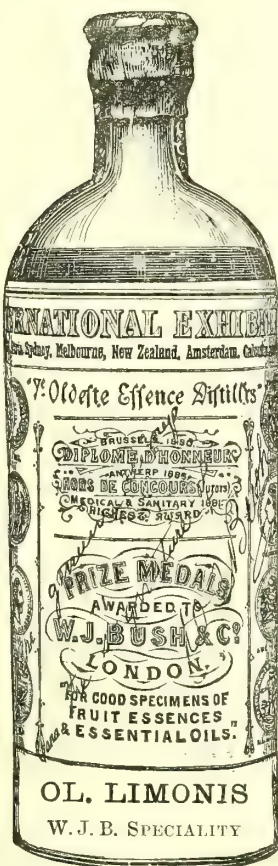
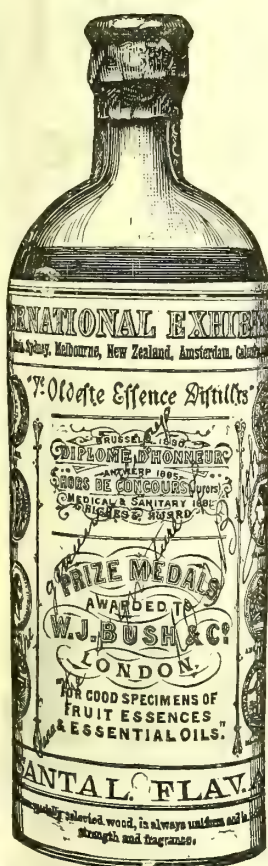
Messrs. EDWARD COOK & CO., Ltd., the Soap Specialists, London, have much pleasure in announcing that the "St. Julian" Tablet Prize Scheme being now closed, they have

***AWARDED***  
**ONE**  
**HUNDRED**  
**POUNDS**

to the Proprietors of the Chingford Market, who have complied with all the conditions of the competition.



**Are**  
you using **Bush's.**



*Essential Oils? If not,*

WRITE FOR PRICES AND A TRIAL SAMPLE TO

**W. J. BUSH & CO., LTD.**

HEAD OFFICES—

**ARTILLERY LANE, BISHOPSGATE, LONDON.**

# Now in the Press.

Ready September 1st,

❧ OUR NEW ❧

# ILLUSTRATED PRICE LIST.

Everything worth seeing and knowing  
will be inside.

If your name is not on our books, send a postcard, and make sure of having a copy.

**F. SCHUTZE & CO., 89 SOUTHWARK ST., S.E.**

## Benzine rect.

# QUITE

when securely packed

**3<sup>D.</sup>**  
**SIZE**

**THREEPENNY, SIXPENNY,**  
2/6 doz. 4/- doz.

There is no danger in holding  
stock by the Retail Chemist  
if the total volume of Benzine  
does not exceed 3 gallons,  
and is securely packed.



# SAFE

in small size bottles.

AND SHILLING SIZES.

8/- doz.

Danger lies in keeping broken  
bulk. To meet the conditions  
of safety we have put on the  
market 1-oz. bottles.

**2/6**  
per doz.

PRINCE ALBERT'S



These Cachoux  
are supplied  
only in Brass  
Boxes.

No. 4s at 3/6 doz.  
No. 5s at 4/- doz.

❧ **CACHOUX.**

No. 4s.  
**NEW FOURPENNY SIZE.**

Three dozen boxes will be  
forwarded, together with Six  
dozen sample packets, to Che-  
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## DIAMOND CEMENT,

FOR MENDING EVERY ARTICLE OF ORNAMENT OR  
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REGISTERED.



6d. size 3/6 PER DOZ.

1/- size 7/- PER DOZ.



# CRAWSHAW'S CRYSTAL DYES.

## 1d., 3d., 6d.

Specially manufactured for Home Use. They Dye Silks, Woollens, Feathers, &c., as no other Dyes can. Chemists in all parts of the world find a steady and continuous sale for them.

**CRAWSHAW'S CRYSTAL DYES** are used by

**CLERGYMEN**, for making fancy inks, and for Church decorations.

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**DRAPERS**, for writing Window Tickets.

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**ANGLERS**, for dyeing feathers, &c., to make artificial flies.

**CARPENTERS**, for staining wood, &c.

**MICROSCOPISTS**, for injecting animal and vegetable tissues.

**CHEMISTS**, for colouring show-bottles, aerated waters, fruit syrups, &c.

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**ARCHITECTS**, for colouring plans and tracings.

**SOLDIERS**, for renovating facings, braids, &c.

**LICENSED VICTUALLERS**, for colouring show-bottles, &c.

**ALL TRADES AND PROFESSIONS** can find some use for these wonderful Dyes, which are both useful and ornamental.

SOAP DYES FOR THE ABOVE PURPOSES ARE USELESS.

## CRAWSHAW'S PERFECT BLACK DYE.

### In 3d. and 6d. Boxes.

These Dyes, which are now sold in all parts of the world, are the only Black Dyes which can be depended upon to give satisfaction. Chemists may with confidence recommend them to their customers.

*Crawshaw's Dyes are sold by all the Wholesale Houses.*

**E. CRAWSHAW & CO.,** MANUFACTURING CHEMISTS, 80 FANN ST., ALDERSGATE ST., LONDON, E.C.

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# SCRUBB'S CLOUDY FLUID AMMONIA

## MARVELLOUS PREPARATION.

Refreshing as a Turkish Bath.  
Splendid Cleansing Preparation for the Hair.  
Allays the Irritation caused by Mosquito Bites.  
Restores the Colour to Carpets.

Of all Chemists, Etc.

Invaluable for Toilet Purposes.  
Removes Stains and Grease Spots from Clothing.  
Invigorating in Hot Climates.  
Cleans Plate and Jewellery.

Price 1s. per Bottle.

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(REGISTERED)

# BATH & TOILET CRYSTALS

(ANTI-ZYMOTIC).

MESATEE CRYSTALS are delicately perfumed Rose, Lemon, Lavender, Almond, or Rosemary.

MESATEE CRYSTALS for the Bath and Toilet are a great luxury, exhilarating and refreshing apart from their Hygienic properties, which render them especially useful for Gouty and Rheumatic subjects.

MESATEE CRYSTALS for the Nursery and general Domestic purposes are invaluable.

MESATEE CRYSTALS for Softening the Water are unequalled.

Highly recommended by the Medical Profession.

No Household should be without "MESATEE CRYSTALS."

Price in Tins, 1/-, 2/-, and 7/-.

Sole and Works: **THE CROWN CRYSTALLINE CO.**  
(Opposite G.W.R. Station), ACTON, W.

## Greensill's

# MONA BOUQUET

*Always Sells Well.*

Now is the time to order  
in a few Dozens.

UNDER ROYAL PATRONAGE.

**EDWARDS'**  
**"HARLENE"** **FOR** **HAIR**  
**THE**

**SPECIAL NOTICE.**

**HANDSOME DUMMIES**

13½ by 5½ by 3½

(being an enlarged reproduction of our wrapped bottles),

**For Counter & Window Displays**

Will be supplied to all Chemists applying for same with the number required, together with Showcards and 1,000 Counter Bills with name and address, free of charge.

CARRIAGE PAID ON ALL GOODS TO ANY PART OF THE BRITISH ISLES.

**EDWARDS' HARLENE** **FOR** **HAIR.**  
**PRICE LIST.**

No. 1 size—Retail, 1/- — Wholesale, 11/- per dozen.

" 2 " " 2/6 — " 27/3 "

" 3 " " 4/6 — " 47/- "

Full Discount of 20 per cent. off Trade Prices to all buyers of £5 and upwards.

TERMS—MONTHLY ACCOUNTS, PROMPT.

**SPECIAL.**

Full Discount of 20 per cent. off Trade Prices to all Buyers of £2 (net), Cash with order.

**CARRIAGE PAID.**

**EDWARDS' "HARLENE" CO., 95 & 96 High Holborn, LONDON**



# Shavo Shaving Cream. TOOTH PASTES

SELLING IN THOUSANDS BY MERCHANTS ALL  
OVER THE KINGDOM.

NO  
CUTTING  
OF  
PRICES.



AGENTS  
WANTED  
IN EVERY  
TOWN.

This Speciality is the greatest luxury to  
gentlemen who shave.

Price Lists and Terms on application to the  
**SHAVO SHAVING CREAM CO.,**  
*Argyle Street, GLASGOW.*

## AND POWDERS.

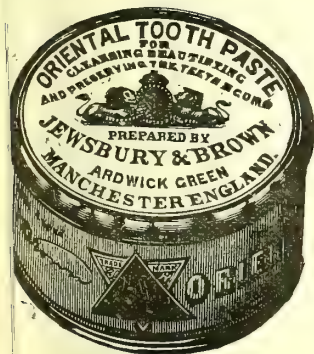
The Undersigned can offer to  
advantage all descriptions.

**SEE PRICE LISTS.**

Special Quotations for Quantity.

**EVANS, SONS & CO.**  
**LIVERPOOL.**

EVANS, LESCHER & WEBB, EVANS AND SONS, LD.  
London. Canada & United States.



# JEWSBURY & BROWN'S Oriental Tooth Paste.

Established over 70 years. Warranted to retain its properties and keep  
good in any climate. The original and only genuine is manufactured solely by

**JEWSBURY & BROWN,**  
**ARDWICK GREEN, MANCHESTER.**

Particular attention should be paid to the Trade Mark, printed in red and green,  
facsimile of which is annexed, as numerous imitations are offered.

MAY BE OBTAINED FROM THE WHOLESALE HOUSES.

*Bills and Showcards forwarded on receipt of Address Cards and directions for enclosure.*

our Name (with Town) stamped on the

GRATIS.



GRATIS.

On orders of Three Dozen.

THROUGH ANY WHOLESALE HOUSE.

**SCAR SUTTON & CO., PRESTON.**

"No. 54 ALTERMARKT"

(ORIGINAL HAUS)

# EAU DE COLOGNE

SUPERIOR TO ANY OTHER BRAND.

Of all Wholesale Houses, and the Sole Agents for United  
Kingdom and the Colonies—

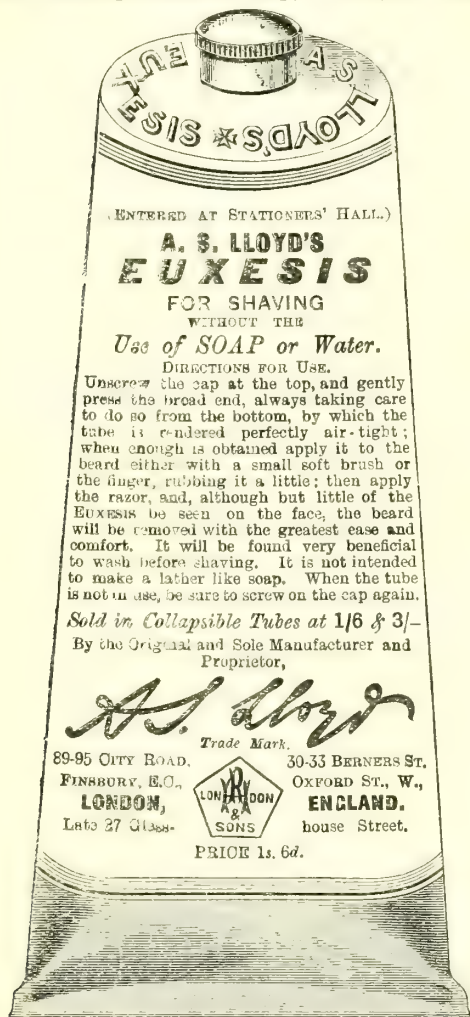
**VAN OPPEN & CO.**

HACKNEY, LONDON, N.E.

# A. S. LLOYD'S EUXESIS

(THE GENUINE).

For Shaving without Soap, Water, or Brush.



Sold by all Perfumers and Chemists throughout the World.

R. HOVENDEN & SONS having purchased, under an administration suit, the Business of the late A. S. LLOYD, with the Receipt, Trade-mark, and Goodwill of the celebrated Euxesis, the Trade are Cautioned that the original and genuine Euxesis is now manufactured at our Factory ONLY, and may be obtained at either of our Warehouses at the following prices:—

10/- per dozen, 9/6 by the 3 dozen, 9/- by the 6 dozen.  
 Retail at 1/6 the Tube; 3/- size to order.

NOTICE.—THE GENUINE A. S. LLOYD'S EUXESIS bears a label printed in BLACK only on a Yellow ground, with our Trade Mark at the bottom, as Illustration.

Proprietors—**R. HOVENDEN & SONS, LIMITED,**  
 30-33 Berners Street, W.,  
 and 89-95 City Road, E.C., LONDON.

Telegrams: "MAJOR HULL."

HIGH - FLASH

## Naphtha

For Paints, Varnishes, Ships' Composition, &c.

## Eucryl

Preparations.

**BATH EUCRYL**, for the Bath.

**EUCRYL TOILET SOAP.**

**EUCRYL DISINFECTING FLUID AND POWDER, &c.**

**CARBOLIC**, of Various Grades.

**CARBOLIC DISINFECTING POWDER.**

**Benzine**,  
 for Cleaning, &c.

**Solvent Naphtha**  
 for India-Rubber,  
 Varnishes, & Paints.

**Naphtha**,  
 for Burning.

**Coal Tar.**

**Pitch.**

**Carbolineum.**

**Imperial Black Varnish.**

**Sheep Dips.**

**Creosote**  
 of various descriptions.

**Fuel Oil.**

**Lucigen Oil.**

**Oil for Wells' Light.**

**Soluble Sanitary Fluid, &c.**

**Marine Glue.**

USE BATH EUCRYL



2

**MAJOR & CO., Lim., HULL,**

And at WOLVERHAMPTON.

**ENQUIRIES SOLICITED.**

Please mention the name of this Paper.



# A. S. LLOYD'S EUXESIS.

For Shaving without Soap, Water, or Brush.

## CAUTION.

The Labels on genuine EUXESIS bear signature of A. S. LLOYD in BLACK INK, and that of his Widow, AIMÉE LLOYD, in RED INK. Refuse any other.

*Sole Manufacturers and Proprietors:*

**AIMÉE LLOYD & CO.**

**8 SPUR STREET, Leicester Square, LONDON, W.C.**

*N.B - When ordering from Wholesale Houses write LLOYD'S EUXESIS (WIDOW'S).*

# SPOTS ON THE SUN

ARE INEVITABLE, WE CANNOT ALTER IT -  
BUT SPOTS ON THE HUMAN FACE CAN  
EASILY BE ERADICATED BY THE  
USE OF

# DR. MACKENZIE'S ARSENICAL TOILET

The Constant use of this Soap renders the Skin  
Soft & Smooth, Removing Pimples, Blotches & all  
Blemishes. As a Skin beautifier it is unequalled.  
1/- a Tablet, Box of 3 for 2/6, Unscented 6d.

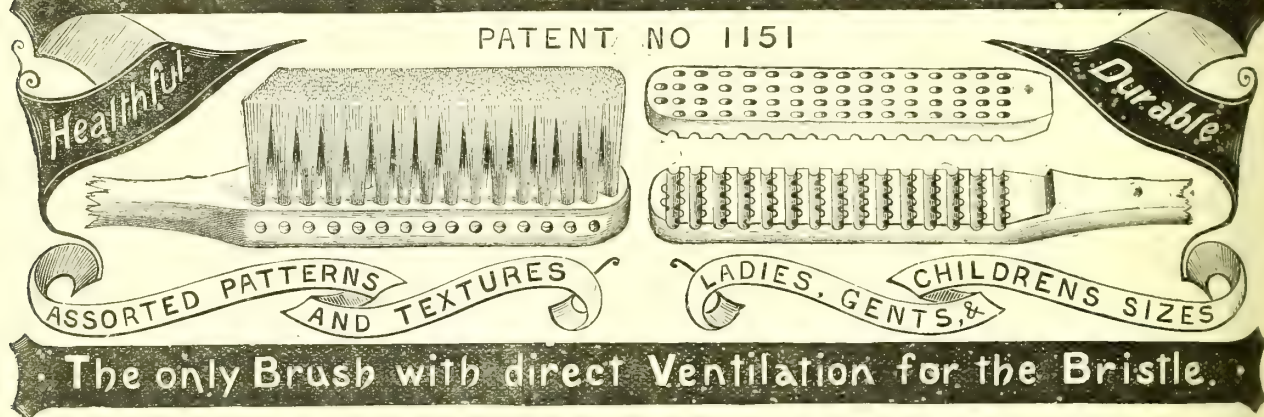
# SOAP



ONE QUALITY—THE BEST.

# The Patent Salutory Tooth Brush

PATENT NO 1151



To be had through Wholesale and Export Houses.

**W. ADDIS & SON** { TOOTH BRUSH MANUFACTURERS AND PATENTEES,  
44 HERBERT STREET, HOXTON, LONDON, N.

## BAILEY'S PATENT RUBBER BRUSHES

*Should be stocked by every  
Chemist and Dealer in Toilet Goods.*

They are extensively advertised, have a ready sale, and show you a good profit.

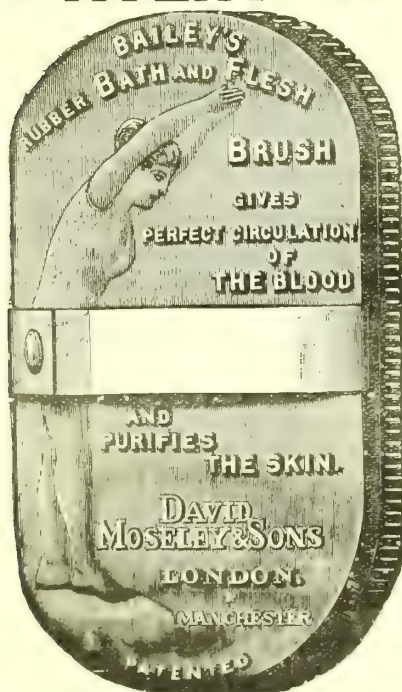
### BAILEY'S RUBBER BATH BRUSHES.

|   |   |                 |
|---|---|-----------------|
| " | " | COMPLEXION.     |
| " | " | TOILET (LARGE). |
| " | " | " (SMALL).      |
| " | " | TOOTH, No. 1.   |
| " | " | " No. 2.        |
| " | " | GLOVE CLEANER.  |

TO BE OBTAINED FROM ALL THE USUAL WHOLESALE HOUSES.

WHOLESALE ONLY from

**D. MOSELEY & SONS**, 51 and 52 Aldermanbury, LONDON;  
ARDWICK, MANCHESTER; and 57 MILLER ST., GLASGOW,



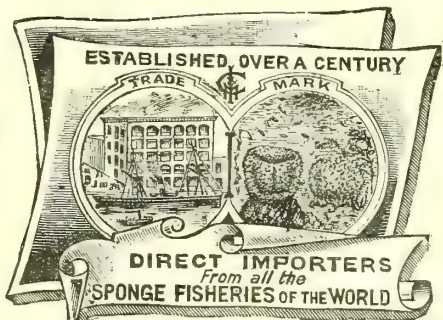


# BUY SPONGES

FROM THE DIRECT IMPORTERS.

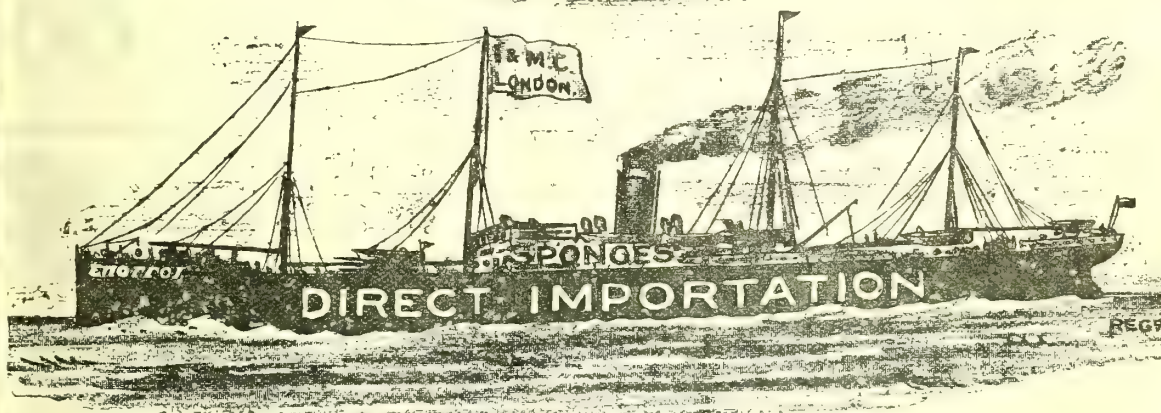
**SPONGES**

*Of Every Description  
always on hand.*



**SPONGES**

*Of Every Description  
always on hand.*



## BRIGHTEN YOUR STOCK

With Quick-selling Reliable Sponges,

TO BE HAD ONLY FROM

**I. & M. COHEN,** SPONGE MERCHANTS, IMPORTERS  
AND EXPORTERS,

*Contractors to the WAR OFFICE & ADMIRALTY, RAILWAYS, STEAMSHIP COMPANIES, &c.,*

53 & 54 Houndsditch, and 66 St. Mary Axe, London, E.C.

Telegraphic Address: "DAQUEZ LONDON."

# "Terpeneless" SOLUBLE OIL OF ORANGE

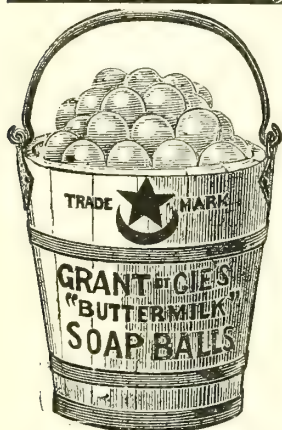
(Heinrich Haensel's Speciality since 1878).

One lb. has the same flavouring power as 30 or 40 lbs. of the ordinary oil. Saves the Solvent alcohol. Can never develop a terebinthinate flavour. Saves freight, packing, and duty, and is consequently **Specially suitable for Export and for Flavouring Syrups, &c.**

TERPENELESS OILS OF LEMON, LIMES, &c., AS PER LIST.

W. POPPELREUTER, 54 Portland Street, MANCHESTER.

London Depot: 19 ST. DUNSTAN'S HILL, E.C.



## BUTTERMILK BALL SOAP

Beware of Imitations. Grant et Cie's is stamped with the Trade Mark—a Star and Crescent.

Sole Wholesale Agents for Grant et Cie's Soap and Perfumes—

### F. SCHUTZE & CO.

89 SOUTHWARK ST., LONDON, S.E.

## D. & W. GIBBS, L<sup>D</sup>.

CITY SOAP WORKS,  
HIGH ST., WAPPING, LONDON.



Trade Mark.

Registered.

Customers' own  
Specialities  
prepared.

THE ORIGINAL SUPERFATTED AND FAMOUS  
**COLD CREAM SOAP**

"Otto,"

"Toilet,"

"Medicated."

### FLORAL CAMEO SHAVING SOAP

(REGISTERED)

Large Tablets in Cartoons, beats Foreign Competitors.

ILLUSTRATED PRICE LIST and SAMPLE TABLETS forwarded  
on receipt of stamps to cover postage.

SEE INSET BETWEEN PAGES 32 & 33 OF THIS ISSUE.



# S. MAW, SON & THOMPSON'S BATH GLOVES, RUBBERS, &c.

|                                                                                 | Gloves.<br>(Pairs.) | Straps.      | Pads. |
|---------------------------------------------------------------------------------|---------------------|--------------|-------|
| <b>CALEFACIO OR BADEN, No. 1,</b><br>soft Brown . . . per doz.                  | 6/0                 | 9/0          | 5/4   |
| <b>CALEFACIO OR BADEN, No. 2,</b><br>hard Brown . . . per doz.                  | 6/0                 | 9/0          | 5/4   |
| <b>CALEFACIO OR BADEN, No. 3,</b><br>soft Brown, assorted patterns,<br>per doz. | 6/6                 | 9/0          | 5/4   |
| <b>CALEFACIO OR BADEN, as-</b><br>sorted patterns, export quality,<br>per doz.  | 4/0                 | (Red labels) |       |
| <b>CALEFACIO (the U.S.), Striped,</b><br>soft Brown . . . per doz.              | 6/6                 | 9/0          | 5/4   |

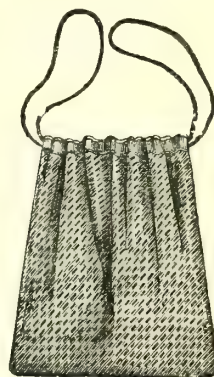
|                                                                                                          | Gloves.<br>(Pairs.) | Straps. | Pads. |
|----------------------------------------------------------------------------------------------------------|---------------------|---------|-------|
| <b>HONEYCOMB, White</b> per doz.                                                                         | 5/4                 | 9/0     | 5/4   |
| <b>REVERSIBLE, No. 1, one side</b><br>soft Brown, the other best<br>White Turkish . . . per doz.         | 6/8                 | 11/0    | 5/4   |
| <b>REVERSIBLE, No. 2, one side</b><br>hard Brown, the other White<br>Honeycomb . . . per doz.            | 6/8                 | 11/0    | 5/4   |
| <b>REVERSIBLE, No. 3, one side</b><br>Egyptian Loofah, the other best<br>White Turkish, per doz., single | 4/6 and 6/0         | 17/0    | —     |

**TURKISH, White, per doz. pairs, 2/9, 3/-, and 4/-; SUPER, 4/9 and 6/-**

**TURKISH, Assorted, Coloured Stripes, per doz. pairs, 4/6, 5/6 and 6/-**

## WATERPROOF SPONGE BAGS.

|                            | 1   | 2    | 3    | 4    | 5     | 6             |
|----------------------------|-----|------|------|------|-------|---------------|
|                            | 7×6 | 8×7  | 9×8  | 10×9 | 11×10 | 12×11 in.     |
| CHECK, Super ...           | 6/6 | 7/6  | 9/6  | 12/- | 13/6  | 17/- per doz. |
| SATIN or SILK ...          | 8/6 | 10/6 | 13/- | 16/- | 21/-  | 24/- "        |
| SATTEEN (double faced) ... | 8/6 | 10/6 | 13/- | 16/6 | 19/-  | 21/- "        |
| " Fancy ...                | 7/- | 8/6  | 9/6  | 11/6 | 13/6  | 15/- "        |



## THE BRIGHTON BAG,

WITH BALL CLASP FASTENINGS, NICKEL-PLATED.

|             | No. 2 | 3    | 4    | 5     | 6             |
|-------------|-------|------|------|-------|---------------|
|             | 8×7   | 9×8  | 10×9 | 11×10 | 12×11 in.     |
| CHECK ...   | 11/6  | 14/- | 16/- | 18/6  | 21/- per doz. |
| " Super ... | 17/-  | 19/- | 21/- | 28/-  | 30/- "        |
| PAISLEY ... | 19/-  | 21/- | 24/- | 30/-  | 34/- "        |

For other descriptions see Quarterly Price Current, page 76.



## S. MAW, SON & THOMPSON,

7 to 12 ALDERSGATE STREET, LONDON.

THE BRIGHTON  
SPONGE BAG.

**VASELINE** FIRST QUALITY  
(Salvo Petrolia)

**VASELINE** SECOND QUALITY

May be procured through all Chemists and Druggists,  
and is Manufactured by

**THE DEE OIL CO., LTD.**  
Works:—SALTNEY, CHESTER.

**SALVO PETROLIA**

Sanctioned by the Board of Trade Marine Department, and included  
in their instructions issued May, 1894, to superintendents of Mer-  
cantile Marine Offices.

Manufactured in five distinct qualities—WHITE, LEMON, YELLOW,  
GOLDEN, and RED (Veterinary).

Packed in Tins, 1, 2, 4, 5, 7, 10, 14, and 28 lbs., 56 and 112 lb.  
Drums, and 3 cwt. Barrels.

**OLEUM DEELINÆ**

(REGISTERED).

Generally Adopted by the Medical Profession for

**OPHTHALMIA, SCURVY, RINGWORM,  
ECZEMA, and all SKIN DISEASES.**

Packed in Cases—One dozen 1s. Bottles; One dozen 2s. Bottles.  
Pint Bottles, 4s. 6d. each, for Hospitals and Dispensing Chemists.  
Testimonials may be had upon application.

**CERESINE WAX**

All Colours.

In Slabs, or in Small Cakes.

**CARNAUBA**

Best  
Bleached.



**BEE SWAX COMPANY, LTD.**  
LIVERPOOL.

Telegrams—"BEEHIVE"

Quotations  
Free  
delivered to  
customer.

All Goods  
Bleached and  
Refined at our  
Own Works.

**BEE SWAX, B.P.**

Yellow or Bleached.

In all size Cakes, from  $\frac{1}{2}$ -oz. upwards.

**JAMES  
BURROUGH**

(LIMITED),

(1)

**S. V. R.**

58  
o.p.  
= 90  
p.c.

60  
o.p.

CALE ST., CHELSEA, S.W.

and Methylated Spirit

AT LOWEST PRICES.

Write for Quotations.

**BOORD & SON,**

DISTILLERS, FOREIGN WINE AND SPIRIT MERCHANTS, AND METHYLATOR.

ALLHALLOWS' LANE AND BARTHOLOMEW CLOSE, LONDON, E.C.

Quotations for S. V. R. Methylated Spirit and Finish on application.

FINEST ORANGE WINE FOR QUININE.

**S. V. METH.**

**JONES & COMPANY,**  
COPPERFIELD ROAD  
LONDON, E.

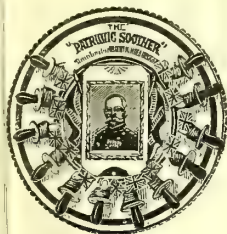
LARGEST MAKERS, IN THE KINGDOM.

We are prepared to supply METHYLATED SPIRIT in  
5-gallon quantities at Lowest Prices.

**REDUCTIONS TO LARGE BUYERS.**  
SAMPLES FREE.



# A FEW OF SHIRLEYS' SPLENDID "SELLERS."



## PATRIOTIC SOOTHERS.

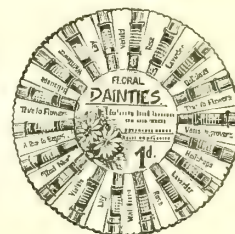
Every soother has a **Union Jack** attached to it.

- 1d. Line ... 8/- gross.  
 2d. " ... 15/- "  
 2d. Line, 16/- gross, with photos of Generals attached to the cord as a button.  
 3d. Line, with Silk Flag, 1 doz. very elaborate card, representing various regiments, 2/- doz.

## FLORAL DAINTIES.

The "Cachou" par excellence. Highly concentrated, small, dainty. Put up in tubes, 3 doz. on a card and 18 on a card, 8/- gross.

Also in silver slide boxes, blocked, 3 tubes in a box, 2/9 doz. boxes, Violet, Heliotrope, Rose, Lavender, Wallflower, and Lily, for high-class trade.



## WHITECROSS LEMONADE.

"Just like Home-made."

- 1d. packets ... 8/- gross.  
 1/2-lb. Lever tins, decorated ... 2/6 doz.  
 1/2-lb. " " ... 4/- "  
 1-lb. " " ... 7/- "

Elaborate tins, in several colours.

## INSECT POWDER.

3d. Line, filled, 1/10; 6d., 3/6.

In smartly decorated tins, with inner dredgers.

X 18 Tins, empty, 6/6; X 18L, large, 10/- gross.



**FLY PAPERS.**—5/- gross; also smaller at 4/-, and Monster at 7/-. Write us, please. Special prices for quantity.

## KILLARNEY PERFUMES.

LILIES, WALLFLOWERS, AND VIOLETS.

2d., 1/4; 3d., 2/2; 6d., 4/; 1/-, 7/6 per dozen, and upwards.

Still Selling Splendidly. Order at once on the Charming New Card, "Shamrock" Design.

## HEAD QUARTERS for TIN BOXES of every description.



X 40.



X 41.



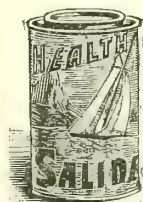
X 35.



X 29.



X 46.



X 25.



X 43.



X 42.

Above tins are produced by us, and can be procured also from Wholesalers by ordering as X No. so-and-so. Special Designs got up. Send for particulars.

## HEALTH SALINES.

- X 38. Ship Design ... 9/6  
 X 41. Fruit " ... 9/6  
 X 43. Pier " ... 9/6  
 Filled Prices on application.

## CITRATE OF MAGNESIA. 4 oz.

- X 29. Girl Design ... 12/-  
 X 40. "As You Like It" Design ... 12/-  
 X 42. Neat Plain Design ... 12/-  
 8-oz. size in Design X 29 ... 16/6

## FULLER'S EARTH.

- X 35 ... 15/- gross.  
 Filled 2/- doz.

## BLAUD'S PILLS.

- X 33. Pink.. ... 7/-  
 " White ... 7/-  
 " Filled, 27/- gross tins, net cash.



## COMPOUND LIQUORICE POWDER.

9/6 gross.  
 Filled, 2/9 per dozen.  
 Guaranteed B.P.

## VASELINE.

X 47. Flush-edged Box, very smart design.

This tin is only sold filled, as we guarantee to put in it. Chesebrough Co.'s production.  
 7/- gross.



X 47.

Customer's own Initials on for large orders.

X 34. 1/2-lb. Lever-Lid Vaseline.  
 9/6 gross.

X 35. 1/2-lb. 16/6 gross.

Above are sold by us filled.

## INSECT POWDER.

X 18 .. 6/6 gross.  
 X 18L .. 10/- "  
 With Designs.

Filled—  
 X 18 .. 1/10 doz.  
 X 18L .. 3/6 "

## BRITISH EMPIRE SACHETS.

On Circle Cards. Very smart 1d. line, with photos of our leading Generals on. 7/6 gross.

SPECIAL QUOTATIONS FOR QUANTITIES. ALSO ALL TINS CAN BE SOLD FILLED IF DESIRED.

ALSO READY, FOOT POWDER, CARBOLIC POWDER, AND HORSE POWDER TINS, &c., &c.

SHIRLEY BROTHERS, Whitecross Works, Rockingham Street, S.E.



# MOLLE,

Alb., Flav.

# LIQUIDUM,

P.B. 1898.

**GOLD MEDAL, Greater Britain Exhibition, 1899.**

**Analytical Report on Stern's  
Paraffinum Liquidum.**

"The sample was odourless, colourless, tasteless, and non-fluorescent. It was free from sulphur compounds, and answered the stringent requirements of the New British Pharmacopoeia. The specific gravity at 60° F. was 0.8832. For all practical purposes I am of opinion that this is sufficiently near to the B.P. limit of 0.885, especially as it has been shown that a higher gravity gives a less pure product.

"It is admirably adapted for the numerous uses, both internal and external, for which Liquid Paraffin has been successfully employed.

(Signed)

"E. J. MILLARD, F.C.S., F.R.M.S.,  
"33 Lothair Road, Finsbury Park, N."

Sole Makers:

Messrs. STERN BROTHERS,  
57 Gracechurch Street, E.C.

**Analytical Report on Stern's  
Paraffinum Molle, Alb. & Flav.**

"The samples of six qualities of White and Yellow Petroleum Jelly submitted to me for analysis fully answered the requirements of the New British Pharmacopoeia for Soft Paraffin (Paraffinum Molle).

"There were no traces of fixed oils, fats, or resin in any of the samples, and no residue on ignition.

"The neutral character and satisfactory consistence of the jellies, and the absence of acrid odour when melted, showed that they had been carefully manufactured.

"In respect to quality they are superior to most of the Petroleum Jellies on the market.

(Signed)

"E. J. MILLARD, F.C.S., F.R.M.S., &c.,  
"33 Lothair Road, Finsbury Park, N."

Sole Makers:

Messrs. STERN BROTHERS,  
57 Gracechurch Street, E.C.

SOLE MAKERS:

**STERN BROS., 57 GRACECHURCH ST., LONDON, E.C.**  
**And at GLASGOW.**

Telegrams—"CENTUMVIR LONDON."

Telephone 2888 Avenue.



# SUMMER LINES.

THE 20TH CENTURY BEVERAGE C.C.C. WHOLESOME DINNER WINE.

## Concentrated Claret Cup

21/6 & 12/6 doz.

**Wine Licence Required.**

"Health Salt" = 27/=

"Sulphur Salt" = 32/=

Lemon Crystals = 36/=

Lime Juice Crystals 36/=

Brown Boot Polish 36/=

Straw Hat Polish 21/= 40/=

"P & O" Chutney 5/6, 10/=

Salad Dressing Cream 8/=

GROSS 4 oz. Tins with lever lids, handsomely labelled. Customer's name & address printed on 1 gross assorted free.

2 1/2 oz. direct squares. Customer's name and address printed on 1 gross assorted, free.

3 oz. white glass bottle, name on 1 gross, free.

All colours. Name on 1 gross assorted, free.

1 lb. and 1 lb. bottles. "Is very good both in flavour and pungency." —Chemist and Druggist.

Prepared with Double Cream. "We commend the Salad Dressing Cream, a piquant and inseparable compound which is ready for use without any addition whatever." —Chemist and Druggist.

Terms: Net Cash. Carriage Paid on £5 orders.

## BLEASDALE, Limited, YORK

### For CLEANING PLATE.

BRADLEY & BOURDAS'S  
ALBATUM or WHITE ROUGE  
(REGISTERED AS A TRADE MARK)

For CLEANING GOLD, SILVER, and PLATED GOODS.  
A trial is only needed to prove its superiority over other Plate Powders in use. Chemists will find it to their advantage to recommend this Powder, as when it is once tried it is always continued to be used.

Sold in Boxes at 1s. and 2s.; Tins, 6s.

15 BELGRAVE RD., & 6 PONT ST., BELGRAVE SQ., LONDON, S.W.

## THE BEST ANTISEPTIC

For Both Internal and External Use.

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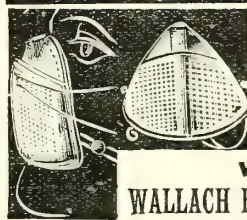
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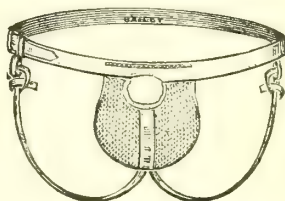


Fig. 1.

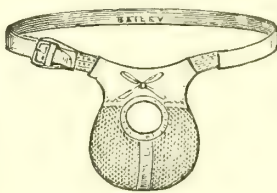


Fig. 2.

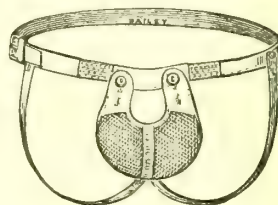


Fig. 3.

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Please repeat our last order for "Suspensory Bandages." We think your idea of arranging the size and qualities by the use of numbers and letters a very excellent one, most convenient to Chemists in ordering, and we find our customers make use of your method. It brings us many repeat orders.

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Each 10 m. = 1 gr. Pepsin Armour. 1 fl. dr. = 6.6 gr. Pepsin B.P.

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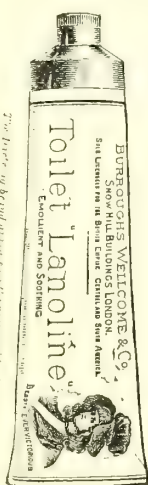
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A sweetening agent far more powerful and more delicate in flavour than saccharin, and about 600 times sweeter than sugar. It undergoes no change in the system, and is therefore prescribed when sugar is harmful. Its portability makes it far superior to sugar for use when travelling or campaigning.

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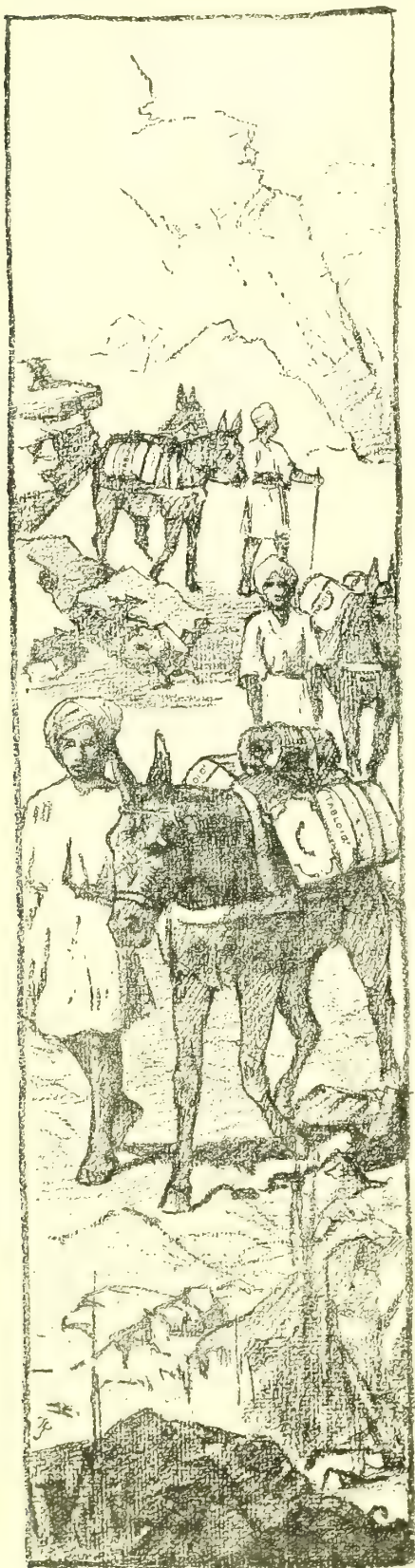
TRADE MARK 'Tabloid' Brand

Thirst Quencher.

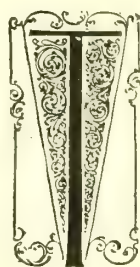
A portable preparation of sodium bicarbonate and tartaric acid, agreeably flavoured with lemon, which provides a means of staving off the feeling of thirst. One sucked from time to time is very refreshing to the parched throat.

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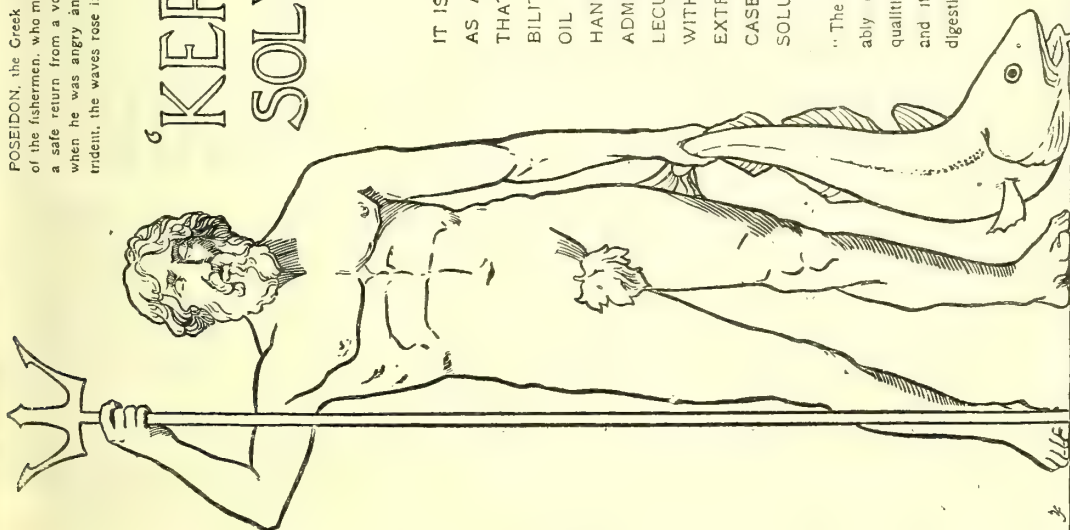
POSEIDON, the Greek Neptune, was the chief god of the fishermen, who made him offerings of fish on a safe return from a voyage. They believed that when he was angry and struck the sea with his trident, the waves rose in great violence.

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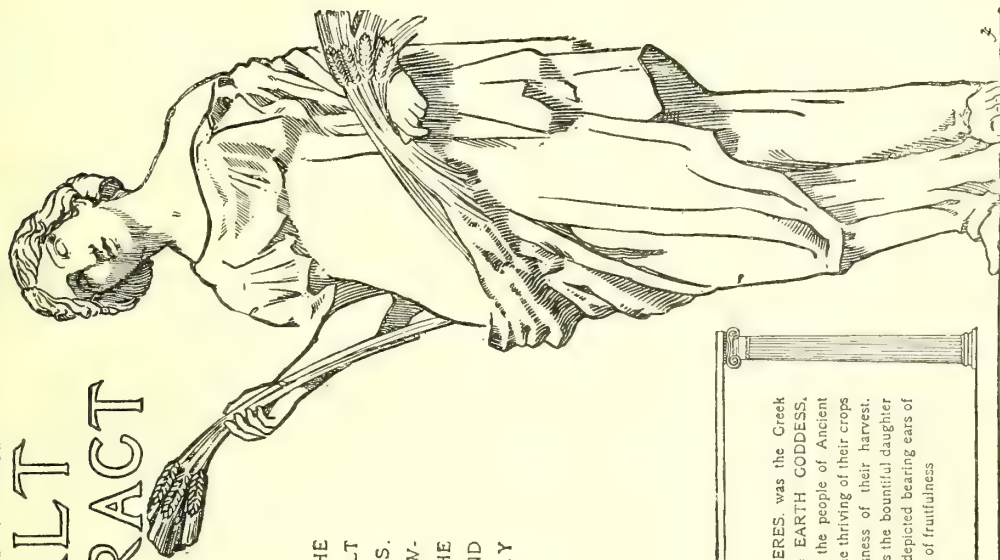
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BVRROGHS WELLCOME & CO

(continued)

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# "VASELINE"

MARK.

|        | 10-lb. tin  | 25-lb. tin   | 50-lb. tin   | Half-barrel     | Barrel         |
|--------|-------------|--------------|--------------|-----------------|----------------|
| White  | 9/3 per tin | 22/- per tin | 41/8 per tin | (about 1½ cwt.) | (about 3 cwt.) |
| Yellow | 5/- "       | 11/8 "       | 21/6 "       | 45/6 per cwt.   | 40/- per cwt.  |
| Red    | 3/6 "       | 8/- "        | 13/4 "       | 28/- "          | 24/6 "         |

## SECOND QUALITY.

|        | 7/- per tin | 15/- per tin | 27/6 per tin | 58/- per cwt. | 52/6 per cwt. |
|--------|-------------|--------------|--------------|---------------|---------------|
| White  | 7/- per tin | 15/- per tin | 27/6 per tin | 58/- per cwt. | 52/6 per cwt. |
| Yellow | 3/3 "       | 7/3 "        | 13/4 "       | 24/6 "        | 21/6 "        |
| Red    | 2/3 "       | 5/- "        | 9/- "        | 19/6 "        | 16/9 "        |

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#### CONTENTS: Vol. LVII. No. 4 (Series No. 1,070).

| PAGE                                                   | PAGE                                                |
|--------------------------------------------------------|-----------------------------------------------------|
| Bandong Quinine-works ... 220                          | Congress of Pure Chemis-try ..... 203               |
| Bankruptcies and Failures 215                          | Deaths..... 126                                     |
| British Pharmaceutical Conference:—                    | Deed of Arrangement ..... 215                       |
| The President and His Hobbies ..... 145                | Editorial Comments:—                                |
| The Programme ..... 148                                | The Conference Week... 134                          |
| Some Pictures and Portraits ..... 149                  | The Lost Opportunity... 136                         |
| The Papers:—                                           | Resins ..... 136                                    |
| Power on the B.P. .... 153                             | Explosives ..... 136                                |
| McWalter on Tinctures 159                              | Notes ..... 137                                     |
| Allen and Brewis on Almond Oil..... 160                | English News..... 119                               |
| Farr and Wright on Nux Vomica ..... 162                | Exeter Association of Chemists and Druggists 205    |
| Perrédes on Strophanthus ..... 163                     | Federation of Local Associations ..... 216          |
| Tyrer and Levy on Liquor Ferri Perchlor. Fort..... 163 | French News ..... 203                               |
| Power on Mercurous Iodide ..... 164                    | Gazette ..... 216                                   |
| Parry on Sandalwood Oil 165                            | Homœopathic Prescriptions, by J. T. Hall ..... 139  |
| Bell on Copaiba..... 166                               | Information Wanted..... 219                         |
| Dudderidge on Phenol Suppositories ..... 167           | Irish News ..... 121                                |
| Shedden on Berberine Phosphate ..... 167               | Legal Reports ..... 213                             |
| Dowdard's Notes ..... 168                              | New Books ..... 132                                 |
| Mair on Indian Drugs... 169                            | New Companies and Company News ..... 210            |
| Tyrer and Levy on Melting-points ..... 170             | North African Experiences, by G. C. Druce ..... 140 |
| Moor and Priest on Drug-ashes ..... 172                | Novelties ..... 211                                 |
| Jones on Asafetida ..... 173                           | Observations and Reflections..... 132               |
| Henderson on Easton ... 174                            | Otto of Rose ..... 125                              |
| Wertheimer and Tyrer on Terebene ..... 174             | Our Town Traveller ..... 128                        |
| Tocher on Chlorine and Nitrogen ..... 175              | Outings ..... 126                                   |
| Dott on the Pharmacopœia ..... 176                     | Personalities ..... 212                             |
| Bird's Laboratory Notes 176                            | Pharmaceutical Aviary ... 132                       |
| Bulgarian Otto of Rose ... 124                         | Pharmaceutical Society of Great Britain:—           |
| Business Changes ..... 123                             | July Examinations ..... 126                         |
| Chemists I Know ..... 129                              | Pharmaceutical Veterans 130                         |
| Congress of Applied Chemistry ..... 204                | Recent Wills ..... 126                              |
| Correspondence ..... 216                               | Reviews ..... 201                                   |
|                                                        | Schleich's Skin-remedies 138                        |
|                                                        | Scotch News ..... 121                               |
|                                                        | South African News ..... 122                        |
|                                                        | Students' Corner ..... 118                          |
|                                                        | Summer Supplements... 206                           |
|                                                        | Testing Disinfectants ..... 220                     |
|                                                        | Trade Report ..... 220                              |
|                                                        | War Notes ..... 143                                 |
|                                                        | Westminster Wisdom ..... 202                        |

## Summary.

A SUMMER IDYLL, in which a syphon played a part, is sketched on p. 219.

MORE OF DR. SCHLEICH'S FORMULAS for skin-preparations are given on p. 138.

THE latest information regarding the Bandong Quinine-works is given on p. 220.

WE BRIEFLY comment upon the report of the inspector of explosives (p. 137).

FOR selling mild mercurial ointment two convictions are recorded this week against chemists (p. 214).

MR. J. T. HALL contributes an interesting article on the dispensing of homœopathic prescriptions (p. 139).

XRAYSER writes in a happy way regarding French pharmacy and the opinions of some of our correspondents (p. 132).

THE STUDY OF RESINS is now taking more definite shape and promises to be a distinct branch of chemistry (p. 136).

DR. LEONARD DOBBIN protests against the manner in which Dr. John Atfield has treated Pharmacopœia critics (p. 216).

THE photograph of the Conference party taken at the Royal Botanic Gardens on Tuesday is printed in this issue (p. 151).

THE names of those who have passed the Minor examination in London this week are printed on p. 126. The failures were heavy.

IN OUR COLLEGE NOTES this week is a photograph of a botanical-excursion party from the Northern College of Pharmacy (p. 119).

AN advance of about 50 per cent. in the price of bismuth is the feature of the markets this week; otherwise business is very quiet (p. 221).

MR. MOSS reports upon the last analytical competition for students, and this time a lady, Miss Barr, of Gourrock, takes off the first prize (p. 118).

WE have interviewed Mr. Alfred Adams, of Ladysmith, Natal, and Mr. J. E. Jones, of Mafeking, both of whom were in the sieges of those towns (p. 144).

SOME PERSONAL NOTES in regard to Mr. Holmes, the President of the B.P.C., with pictures illustrative of his hobbies in natural history, are printed on p. 145.

IN THE SECRETARY BIRDS who are taking the arena in our pharmaceutical aviary this week, Messrs. Naylor and Ransom of the B.P.C. will be recognised (p. 132).

TWO pharmaceutical veterans are figured in our pages; they are W. B. Randall, of Southampton, and Dr. A. M. Robertson, of Glasgow. Their portraits are given (p. 130).

TWO OF OUR WAR CORRESPONDENTS write further letters in regard to their experiences in South Africa. The notes are illustrated with a picture of dispensers and Boer prisoners (p. 143).

MR. G. CLARIDGE DRUCE, the new President of the B.P.C., contributes to this number an entertaining article on his North African experiences, which is illustrated with photographs (p. 140).

THE PHARMACY AND MEDICAL CLAUSES of the Companies Bill were struck out by the House of Commons on Tuesday afternoon. The debate is reported on p. 202, and the incidents which led up to it on p. 137.

THREE TYPES OF CHEMISTS are sketched with the pen by "Six-and-Six," and with the pencil by our artist. They are the Pecksniff of pharmacy, the chemist who stands at his door, and the chemist who smokes (p. 129).

SOME NEW INFORMATION regarding otto of rose, especially with reference to its production in Bulgaria, is given on p. 198, and in this connection Mr. E. J. Parry reports upon several samples of otto, the like of which have not been reported to science (p. 198).

THE COURT OF APPEAL has reversed the judgment of Mr. Justice Stirling, which permitted Mr. C. R. Valentine to call a beef-preparation "Valentine's," the Court holding that the proprietors of Valentine's meat-juice has the right to the name (p. 213).

THE BRITISH PHARMACEUTICAL CONFERENCE has met in London this week, and is fully reported in this issue. See table of contents for details. The meeting was a complete success. Dublin is the place of meeting next year, and Mr. G. Claridge Druce the President (p. 145).

**For Thursday's News see the Coloured Supplement.**

## Students' Corner.

CONDUCTED BY RICHARD J. MOSS, F.I.C., F.C.S.

### QUALITATIVE ANALYSIS.

THE subject of the next exercise in qualitative analysis will be a mixture of not more than three salts. The mixture is to be submitted to a thorough systematic examination, all its constituents are to be detected, and proof is to be given that the substances detected are the only constituents of the mixture.

Students' applications for portions of the mixture of salts (accompanied by a *stamped and addressed envelope*, not a stamp merely) will be received up to Wednesday, August 1, and the samples will be posted on August 2.

Students' reports will be received up to Saturday, August 11. Each report should contain a concise account of the work done, and should include a list of the constituents detected. In this list any substance regarded as an accidental impurity should be distinguished from the essential constituents of the salts composing the mixture.

### REPORTS.

The mixture of salts sent to our correspondents on July 5 contained 3 parts of sodium chloride, 1 part of potassium ferrocyanide, and 1 part of ammonium oxalate.

The calculated composition of this mixture is:—

|                               |     |     |     |     |        |
|-------------------------------|-----|-----|-----|-----|--------|
| K                             | ... | ... | ... | ... | 7.39   |
| Na                            | ... | ... | ... | ... | 23.99  |
| NH <sub>4</sub>               | ... | ... | ... | ... | 4.50   |
| Cl                            | ... | ... | ... | ... | 36.01  |
| Fe(CN) <sub>6</sub>           | ... | ... | ... | ... | 10.05  |
| C <sub>2</sub> O <sub>4</sub> | ... | ... | ... | ... | 11.00  |
| H <sub>2</sub> O              | ... | ... | ... | ... | 7.06   |
|                               |     |     |     |     | 100.00 |

The mixture contained a notable trace of calcium sulphate as an impurity.

There were forty-two packets of the powder sent to applicants, and only twenty-one reports of analyses were received in reply.

The analysis does not seem to have presented any great difficulty, except in the detection of the oxalic radicle, in which ten students failed. Sodium was detected by everybody; one student thought only a trace was present. There was one failure in the detection of each of the remaining four constituents.

As an illustration of the tendency to fall into a mechanical way of carrying out the instructions of a text-book, we may mention that several of our correspondents boiled the powder with sodium carbonate preparatory to examining for the acid radicles. This was done notwithstanding the fact that the absence of all metals except the alkali metals and ammonium had, in each case, just been ascertained. It would appear that the operation was performed in pure ignorance of the object it is intended to attain, or perhaps in thoughtless faith in the inspired wisdom of the text-book. It is interesting to note that nobody who performed this useless operation noticed that it failed to produce a precipitate. Nothing in fact happened, except that a considerable amount of useless and objectionable matter was added to the substance under examination, and the problems to be solved were so far complicated. Boiling with sodium carbonate should only be resorted to when metals which might interfere with the detection of the acids are present, and may be removed by this treatment.

In several cases the failure to detect oxalic acid was due to pure oversight, no experiment having been performed by which its presence could be ascertained. In other cases it

is almost certain that a mineral acid was the cause of no precipitate being obtained with calcium chloride. We must admit our inability to throw any light upon a third class of failure. Apparently everything was done that ought to have been done, but the proper result was not observed. We must leave our correspondents to speculate as to the cause of their errors, and perhaps those who have been most at fault will have little difficulty in finding an explanation.

### PRIZES.

The First Prize for the best analysis has been awarded to ANNE M. BARR, 57 Kempoch Street, Gourrock.

The Second Prize has been awarded to

E. H. Henry, 57 Old Town, Clapham, S.W.

### MARKS AWARDED FOR ANALYSES.

|                             |     |               |     |    |
|-----------------------------|-----|---------------|-----|----|
| Anne M. Barr (1st prize)... | 100 | R. E. Jackson | ... | 80 |
| E. H. Henry (2nd prize) ... | 99  | Alex. T. Hope | ... | 79 |
| Calabar ... ..              | 98  | Dubium        | ... | 78 |
| Turps ... ..                | 97  | Hydroxyl      | ... | 77 |
| Aberthaw ... ..             | 95  | Tragacanth... | ... | 76 |
| Longtome ... ..             | 94  | Aquilo        | ... | 75 |
| B. Persei ... ..            | 93  | Bromo-Iodine  | ... | 73 |
| Lal ... ..                  | 91  | J. Matthews   | ... | 70 |
| J. S. H. ... ..             | 85  | Tyres         | ... | 65 |
| J. R. Stott ... ..          | 83  | Carolus       | ... | 30 |
| H. Brunskill ... ..         | 82  |               |     |    |

### TO CORRESPONDENTS.

*Prizes.*—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half a guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as a second prize.

*Note.*—All communications should include the names and addresses of the writers.

J. S. H.—You found the mixture consisted of salts of the alkali metals and ammonium. If only a small trace of sodium had been present, the residue left on evaporating the residual solution to dryness and igniting must have consisted almost entirely of potassium salts, but the precipitate produced by platinic chloride was not abundant enough for such a supposition, and the sodium flame-coloration completely masked that of potassium. It must be remembered that the yellow precipitate of potassio-platinic chloride contains less than a sixth of its weight of potassium, so a little potassium goes a long way. As regards the persistence of the flame-coloration, you should bear in mind that it is a matter of temperature. If the wire is placed almost touching the tube of the burner, and kept below redness, a minute quantity of sodium chloride will colour the flame for hours, whereas on a fine wire, in the hottest part of the flame, the sodium salt is volatilised almost immediately.

J. R. STOTT.—The fact that warming with sulphuric acid did not blacken the powder gave no indication as regards oxalates; they are not carbonised, the acid radicle being resolved into carbon monoxide and dioxide. Boiling with sodium carbonate, preparatory to examining for the acids, was an unnecessary proceeding. The method you adopted for the separation of the ferrocyanide was about the worst you could employ, because silver oxalate is only sparingly soluble in dilute nitric acid. This, however, is not the only cause of your failure, because, according to your report, the solution which failed to give a precipitate with calcium chloride contained free nitric acid.

H. BRUNSKILL.—There is a want of system about your work. You should assume that all the ordinary metallic and acidulous radicles may be present, and proceed systematically to detect them or prove their absence. No experiment that you performed would have led to the detection of an oxalate.

R. E. JACKSON.—You proved the presence of two acids, but you omitted to show that all others were absent. The detection of the oxalate presented no real difficulty.

ALEX. T. HOPE.—You found that a solution obtained by boiling the powder with sodium carbonate and acidulating with acetic acid gave no precipitate with calcium chloride—a result that seems incredible considering that the mixture of salts contained 25 per cent. of ammonium oxalate. Undue dilution would explain your result, but an enormous excess of water would be required. The presence of a mineral acid would prevent a precipitate from forming; but it is just as likely that you made some mistake in the reagents you used.



**DUBITUM.**—You say the precipitate obtained on adding calcium sulphate to a solution of the powder did not, when ignited, effervesce with an acid. The question remains, If the calcium salt you precipitated was not an oxalate, what was it? A saturated solution of calcium sulphate contains, roughly, 0.07 per cent. of calcium, so that it would be necessary to use a great deal of the solution to obtain a sufficiency of the precipitate for examination—a difficulty that does not apply to a highly-soluble salt of calcium such as the chloride.

**HYDROXYL.**—The only cyanides that could be present were those of the alkali metals or ammonium; but these salts are very unstable, even the carbon dioxide of the atmosphere decomposes them, so that the powder would have smelt of hydrocyanic acid if an appreciable quantity of cyanide had been present.

**TRAGACANTH.**—We repeated your experiment for the detection of an oxalate, and are quite at a loss for any explanation of your results, unless you added the calcium chloride to a solution of the powder containing a mineral acid. A large excess of acetic acid would retard the formation of a precipitate of calcium oxalate, but in the presence of so much of the oxalic radicle it would be difficult to use enough acetic acid to completely prevent the formation of a precipitate.

**AQUILO.**—The portion insoluble in water was clearly a small fraction of the whole powder. It consisted of calcium oxalate, and arose from interaction of the oxalate with calcium sulphate present as an impurity in the common salt, which constituted three-fifths of the powder. You failed to detect calcium because you merely tried to precipitate it as carbonate, a salt comparatively soluble in the great excess of ammonium salts in your solution. Calcium phosphate is much less soluble, hence the precipitate you obtained with sodium phosphate. In the ordinary course of an analysis it is always desirable to remove any trace of calcium by precipitating it as oxalate before proceeding to test for magnesium.

**BROMO-IODINE.**—When you heated the powder in a bulb-tube you should have proceeded more cautiously, first observing the effect of a slight rise of temperature, then trying what stronger heating would do, and so on to the highest temperature attainable. At one stage ammonia was given off so abundantly that you could not have failed to notice it. An ammoniacal sublimate deposited on the sides of the tube, and was very conspicuous when the experiment was properly performed. The special test for ammonia should be made in the presence of as little water as possible. The dry powder is mixed with calcium hydroxide or with soda-lime, in a watch-glass, and then cautiously moistened. A minute quantity of water suffices to produce chemical action; any excess reduces the sensitiveness of the reaction, because water at ordinary temperatures absorbs about six hundred times its volume of ammonia.

**J. MATTHEWS.**—See remarks to "Tragacanth." The symbol for chlorine is written Cl, not CL.

**TYRES.**—If you used a pretty strong solution of the powder the arium precipitate would consist of oxalate and ferrocyanide—two salts not readily soluble in water. When you moistened the powder with dilute hydrochloric acid, you observed no characteristic reaction. If a sulphite had been present sulphur dioxide would have been evolved, and you could scarcely have failed to notice its very characteristic smell.

**CAROLUS.**—You did not notice effervescence when you treated the powder with a dilute acid, therefore no carbonate was present. The effect you obtained with mercuric chloride was quite different from that produced by a bicarbonate, as you might have ascertained by trying the experiment with the latter salt.

#### COLLEGE NOTES.

At the examinations held this month at the London College of Chemistry, Pharmacy, and Botany, the following awards were made:—Chemistry and Physics: silver medal, J. Edmund Owen; bronze medal, R. E. W. Parker. Botany: silver medal, David L. Jones; bronze medal, Septimus Royce. Materia Medica: silver medal, Septimus Royce; bronze medal, E. J. Challenger. Pharmacy: silver medal, J. H. Harries; bronze medal, T. E. B. Lewis.

On July 18 the students of the Metropolitan College of Pharmacy presented a handsome cheque to Mr. G. T. Branch, one of

the demonstrators who, after several years at the College, is about to go to South Africa to take up an appointment as assayer.

**PHARMACEUTICAL EDUCATION IN SCOTLAND.**—One of the successful schools of pharmacy is the Edinburgh Central School of Pharmacy, 26 Clyde Street, Edinburgh, conducted by Mr. W. Beaverville Cowie. We are reminded of the school by the receipt of a proof copy of the new prospectus, which contains views of the school exterior and the interiors of the laboratories and classrooms. To show that the prospectus is up to date, we may mention that it contains the full list of examinations now accepted by the Pharmaceutical Society of Great Britain as the entrance-examination for pharmaceutical aspirants. The school was established in 1825, and in the few sessions which have elapsed has passed through its portals over 250 students.



BOTANICAL EXCURSION PARTY FROM THE NORTHERN COLLEGE OF PHARMACY AT KNUTSFORD ON JUNE 25.

## English News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

#### Brevities.

The Newport-on-Usk chemists have agreed to close their establishments on Thursdays at 1 o'clock.

On July 19 Mr. R. Burns, assistant to Mr. Daniels, chemist, Tottenham, sustained a fracture of the right leg from a bicycling accident.

Mr. T. I. Hayton, chemist and druggist, High Street, Wigton, Cumberland, himself an expert motorist, has taken up an agency for the supply of motor-vehicles.

On July 19 Mr. Godfrey Gibbs, of Upper Norwood, drank a solution of cyanide of potassium, which he was in the habit of using for photography, in mistake for a cooling-drink.

Two young men engaged in the sulphur-department at a Barrow paper-works were overcome by an escape of the fumes on July 21. One was brought out dead, and the other is not expected to recover.

The Cocker-mouth Magistrates have transferred the wine-licence held by Messrs. Jennings Brothers, Market Place, Cocker-mouth, to their successors, Messrs. Cooper & Stern, chemists and druggists.

Albert Harriman, in the employment of the Clayton Aniline Company as a naphtha-washer, was found unconscious in the naphtha-still room at the works last week, and died shortly afterwards.

John Collins (15) has been committed for trial for attempting to poison the manager of the Temperance Hotel,



Wood Street, E.C., and further with attempting to commit suicide by drinking a mixture of iodine and ether.

At the weekly meeting of the London County Council on July 24, it was recommended that the chemist be authorised to continue the analyses of water, for a further period of four months at an expenditure of 37*l.* a week. This was agreed to.

#### A Question of Competency.

At a meeting of Gnosall Rural District Council on July 16 a letter was received from a firm of solicitors with reference to the refusal of the Council to accept an analysis of water at Gnosall made by Mr. Marson, chemist, Stafford. Mr. Marson also wrote stating that the samples of water analysed were examined by him for his private customers. He continued:—

To relieve my customers from further unpleasantness I now reply to your query as to whether I am a qualified analytical chemist. I am a fully-qualified chemist and a member of the Pharmaceutical Society of Great Britain, qualified and authorised thereby to act as an analytical chemist. I am prepared at any moment to stand by my analysis of the samples of water submitted to me, and also to defend my position, my qualification, and my authority to act as an analytical chemist against any action the Board may think fit to take. . . . I am fully conversant with the Public Health Act, and know of no clause in that Act requiring an analytical chemist to state on the heading of every report he sends out that he is qualified to carry it out. Perhaps your Board will be good enough to point it out if it is so. It is my intention to communicate the facts to the Pharmaceutical Society, and I am sending to-night a newspaper copy of your Board's report for their consideration. I have already consulted my solicitor, and instructed him to watch the published newspaper reports of your meetings, and to take immediate action on my behalf to protect my reputation should any slanderous or libellous imputation insinuating incompetency again appear in the public press.

One of the members observed that Mr. Marson would have saved himself expense and trouble if he had written a civil letter at the outset, and the matter ended.

#### Society of Chemical Industry.

A special train left Paddington a few minutes after 10 on Friday morning, July 20, conveying a party of about 400 members and their friends to Oxford. At their destination they were received by Mr. W. W. Fisher, M.A. (President of the Society of Public Analysts); Mr. G. Claridge Druce, M.A. (Fielding Curator of the Botanic Gardens), Mr. E. C. Alden, and other gentlemen who had undertaken to act as chaperons. The morning was spent in visiting a number of the principal Colleges, the pleasure of the visit being greatly enhanced by the admirable arrangement of the party into groups not too large to be "personally conducted" by the experienced and courteous guides. Moreover, each visitor was provided with a free copy of Alden's "Guide to Oxford," an excellent companion stored with information and not too loquacious. At 1.30 a beautifully-served luncheon was partaken of in the Town Hall, a handsome and finely-decorated chamber in the new municipal buildings. After this the party reformed into groups and continued their inspection of more colleges and other historic buildings—including the Bodleian Library and Radcliffe Camera, from the roof of which a magnificent bird's-eye view of the city was obtained. At 4.30 on the delightful lawns of Worcester College Gardens afternoon tea was enjoyed, through the kind offices of Professor Odling. To add to the pleasure thus afforded a programme of glees was excellently rendered by a quartette under the direction of Mr. E. Jackson, of New College Choir. A little before 7 the whole of the party re-assembled at the Town Hall, where ample justice was done to a substantial repast. The President in a clever and witty speech expressed the gratitude of the assembled members and friends to those who had laboured so untiringly and so successfully for their enjoyment; Mr. Fisher and Mr. Druce acknowledged the compliment on behalf of the Oxford Committee, and Mr. Tyrer returned thanks for the London Committee and the Honorary and Permanent Secretaries. The special train which had conveyed the party from London started on its return journey at 8.30 and a few minutes after 10 steamed into Paddington, and thus terminated one of the best-organised and most enjoyable excursions in the Society's annals.

#### Bits from Birmingham.

A neighbouring town (Smethwick) has for twelve years established a District Committee of Tradesmen, who in the summer hold annually charity sports, and in this way have distributed amongst the local charities no less a sum than 358*l.* in six years. Here is a wrinkle for the local brotherhood, which might assist in breaking down the innate apathy and solitude of the pharmacist, and, while adding to his few pleasures, offer relief and comfort to those who are needy and sick.

A new form of advertisement appears in the local papers under the head of "Dispensing." It runs:—"Wanted, lady student as Boarder, apply Miss ———." Is it that inter-cibos there will be in place of the usual piano-playing and novel-reading, a little bit of B.P. and gadding with pharmacy and dispensing?

The great heat (110° in the sun and 85° in the shade) has created so great a demand upon the chemist for effervescent citrate, ginger-beer powders, and the like that in several cases urgent orders had to be despatched for further supplies to keep up the continued drain.

Birmingham being an inland town, there does not appear to be so great a need for waterproof bathing-caps as the lavish display in the windows of the central establishments suggests.

The pecuniary needs of Birmingham University are well looked after by its Chancellor, whose persuasive eloquence secured by gift from Lord Calthorpe, a very wealthy suburban owner, a valuable site of 25 acres for the new 'Varsity building. The Chancellor still wants about 15,000*l.*, but townsmen are confident that he will be quite equal to the task. Sir J. Chance, of glass and alkali fame, has offered to the authorities 50,000*l.* on easy conditions for the benefit of the University Endowment Fund. Would it be possible for the Chancellor to persuade some prosperous firm of pharmacists to offer a similar sacrifice at learning's shrine for the endowment of a chair of pharmacy? This could be done well for a tenth of the "Chance" bequest.

Are thermometers liars? One in the shade registered 85°, and another a few yards away and similarly placed was 75°, and both at an eminently scientific establishment not 10,000 miles from the Council House.

In spite of the large falling off in attendance of students at the science classes in the Technical School last year the grant was only 50*l.* less, so that the quality of the work must have been higher. In the honours stage the grant was 67*l.* against 27*l.* the year before.

Week the Lord Mayor's garden-party at Maple Bank last week it is gratifying to know that pharmacy was well represented.

The Birmingham brewers have disestablished the "long pull," but have in place established with great success a cold storage for hops, to ensure a better quality. It seems an excellent idea, and might be commended to pharmacists to obviate the destruction of their drugs by mould and insect life.

The Dudley Board of Guardians have increased their workhouse medical man's salary from 150*l.* to 200*l.*, out of which it appears he provides the drugs, which amount to 60*l.* per annum. Why cannot they employ a legally qualified dispenser and act less in accordance with the old-fashioned bumbledum style? If the Pharmaceutical Society would impress public bodies with that desideratum it would do a great service to the community as well as to its members.

Unquestionably the one great object of perspiring humanity at the present time is to find a cool and refreshing drink. Every person you meet has his own particular fancy, but certainly one of the best beverages is that composed of barley-water and iced lemonade. This drink enjoyed great popularity last summer in London clubland; indeed, it became so popular that the cash takings of several of the clubs were seriously affected, the barley-water being called for in preference to wines, &c., and this season for this financial reason several of the clubs are refusing to supply the beverage. So says the *Birmingham Daily Mail*.



**Carbolic Cases.**

Two children, a boy and a girl, were admitted to St. Thomas's Hospital last week, suffering from carbolic-poisoning. The boy drank the poison from a lemonade-bottle, and the girl thought she was drinking ginger-beer. Neither is expected to recover.

On July 16, at Portsmouth, Caroline Harmer drank a quantity of carbolic acid and died. The bottle which had contained the acid was produced at the inquest, and was unlabelled.

**Cricket.**

Burroughs, Wellcome & Co. C.C. v. Stevenson & Howell C.C. Played at Bowes Park on July 21, B. W. & Co., 54; S. & H., 53.

**Fire.**

On July 17 fire broke out in a store-room of the Thompson Drug Company, Fleet Street, Ashton-under-Lyne. As the building was stocked with goods of a highly-inflammable nature much anxiety was felt as to the safety of the premises, but the prompt efforts of the firemen averted serious damage.

**The Patent-medicine Vendor's Plaint.**

At Nottingham Assizes on July 17 and 18, an action was heard in which Mary Jalland Wright, patent-medicine vendor, claimed 549*l.* damages from the Mayor and Corporation of Rochdale on account of loss of reputation and out-of-pocket expenses arising from an alleged breach of contract the letting of the Rochdale Town Hall. Plaintiff applied for the hire of Rochdale Town Hall for two days to give a course of lectures, and the Corporation at first acquiesced, but afterwards returned her cheque, and declined to allow for the use of the Town Hall, giving no explanation. Mrs. Wright, in her evidence, said she calculated that she would have made 100*l.* clear profit for retail and wholesale sales of her patent medicines had she had the use of the Town Hall, whereas her gain was only about 3*l.* Plaintiff's travelling agent deposed to the hiring of the Town Hall and the arrangements made with chemists in the town for the sale of plaintiff's medicines, while a lady-witness stated that she and sixty other ladies were disappointed by the lecture not taking place. Mr. Justice Wills said damages for loss of reputation were entirely out of the question, and the jury awarded the plaintiff 42*l.* for out-of-pocket expenses.

**Irish News.**

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

**Claim for Wrongful Dismissal.**

At Carlow Assizes on July 14, W. V. Ryan, chemist's assistant, sued Daniel Joseph McGrath, pharmaceutical chemist, Carlow, for 21*l.* damages for wrongful dismissal and balance of wages. Defendant traversed the plea for wrongful dismissal, and lodged 4*l.* in court in full discharge of all wages due. The case excited considerable interest, as the dismissal hinged on plaintiff's alleged misconduct towards defendant's domestic servant, and the jury ultimately found a verdict for defendant. Judgment was entered accordingly, and it was directed that the 4*l.* lodged in court should go in part payment of defendant's costs.

**Outing.**

On July 21 the employés of Messrs. A. & R. Thwaites & Co. (Limited), chemists and mineral-water manufacturers, Dublin, had their customary annual excursion. The party, numbering 120, started in drags from the company's premises in Upper Sackville Street, and proceeded to Powerscourt Waterfall, where an enjoyable day was spent. A cordial vote of thanks was accorded to the managing director, Mr. A. W. Orr, for his kindness in arranging the excursion.

**Fire.**

At Dublin, on July 21, a serious fire occurred on the premises of Messrs. Boileau & Boyd (Limited), chemists and

druggists, Bride Street, as the result of which a newly-erected building used as a store for drugs, oils, and paints was completely gutted. The outbreak was first noticed in the early morning, and the fire-brigade was successful in preventing the flames spreading to the main buildings. The damage is covered by insurance, and the origin of the fire is unknown.

**Contract Settled.**

The question of the medicine-contract again came before the Guardians of the Newry Union. Five tenders were received for the supply of medical and surgical appliances—S. Connor & Sons, Newry, 15 per cent. off list-price; Smith & Shepherd, Dublin, 7½ per cent.; the Medical Requisite Company, Cork, 10 per cent.; Fannin & Co., Dublin, 15 per cent.; and the Apothecaries' Hall, Dublin, 12½ per cent. off. Messrs. Connor's tender was accepted.

**Business Changes.**

Mr. J. O'Farrell, L.P.S.I., has removed from Upper Baggot Street, Dublin, to Morehampton Road, Pembroke Township, where he has opened a neat and compact pharmacy.

The homœopathic medical hall, Great Victoria Street, Belfast, for many years conducted by the late Dr. R. T. Brochie, has been acquired by Dr. Storror, late of Southport, who has also taken over deceased's practice.

**Condemnation.**

Mr. William Hayes, ex-President of the Pharmaceutical Society of Ireland and director of Hayes, Conyngham & Robinson (Limited), Pharmacists, Dublin, was examined last week by the City Boundaries Extension Committee. He opposed the annexation of Rathmines, and thought the 6,000*l.* a year spent on keeping up a Lord Mayor might be applied to building houses for the working-classes. In reply to counsel's suggestion that witness might himself wish to act as Lord Mayor at 3,000*l.* a year, Mr. Hayes declared vehemently that he would not accept the post at 10,000*l.* a year. He considered Dublin a badly-managed municipality.

**Appointing an Analyst.**

The Clonmel County Council have resolved that each of seven Poor-law Unions in the South Riding of Tipperary appoint Sir Charles Cameron as their analyst, at an inclusive salary of 80*l.* a year, as against 50*l.* formerly paid. The Carrick Board of Guardians dissent on the ground that ten months ago Sir Charles Cameron's salary was fixed for the Tipperary and Waterford portion of the Union only.

**Above Suspicion.**

The Local Government Board find fault with the dispensary-arrangements at the Omagh Union. Amongst other things complaint is made that in some cases invoices are not sent with the medicines as they should be. Mr. Culgin (a Guardian) asked if there were no possibility of the dispensary-doctors using the medicines for their own private patients. He thought some means should be adopted to detect abuse of the drugs. Mr. Clements (another Guardian) said there was a register kept of the different quantities of medicines given out, and the medical officers were above suspicion.

**Scotch News.**

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

**Thought it was Treacle.**

In the northern district of Glasgow on July 20 several children were found in different streets of the same locality in a more or less unconscious condition. It transpired that they had found in a stable a bottle containing a thick black liquid which they thought was treacle. This they proceeded to drink amongst them, and immediately became very ill. The liquid proved to be a preparation used for dressing horses' feet, and the children, on being conveyed to the infirmary, were found to be suffering from the effects of an irritant poison. With the exception of one boy they have all practically recovered.



### From the Drug Counter to a Science Inspectorship.

Lord Balfour of Burleigh, the Scotch Secretary, has offered Mr. Frank Wylie Young, F.C.S., F.R.S.E., of Dundee, the appointment of Inspector of Science Schools in Scotland, which Mr. Young has accepted, and he will enter on the duties of the office on September 1. The appointment is of interest to us from the fact that Mr. Young acquired his



MR. F. W. YOUNG.

taste for science behind a pharmacy counter. He was originally apprenticed to a firm on the High Street of Dundee, but completed his apprenticeship with Mr. Charles Kerr, with whom he remained as an assistant, having meanwhile (in 1873) passed the pharmaceutical Preliminary examination. He studied scientific subjects under Mr. Stephen Cook at the Y.M.C.A. evening classes in Dundee, and was so successful that he obtained a scholarship in the Royal College of Science, where he also did so well that he acted as a demonstrator. With this experience he returned to Dundee as successor to Mr. Cook, and through his influence most of the young druggists of the town in the early seventies were smitten with scientific desires. The classes flourished and the school became one of the most important under the South Kensington scheme in Scotland. Mr. Young also from 1877 acted as Science Master to the Dundee High School. He is an excellent lecturer, and has the knack of enthusing his pupils into a lively interest in their studies. Several of his earlier pupils have become distinguished chemists—Professor James Walker, D.Sc., F.R.S., was one of the first, and Mr. D. H. Nagel, M.A., one of the Oxford University chemistry lecturers, was another—while many of his students on the physical side are now science teachers in various parts of the kingdom. When a Technical Institute was founded in Dundee in association with the University College, Mr. Young was appointed the director, and he was the first Hon. Secretary of the Scottish Association for the Promotion of Technical and Secondary Education. His new appointment is one for which he is admirably fitted; especially on account of his remarkable gift in discovering the mental powers of the most unlikely subjects. In an industrial city such as Dundee many of the science students were artisans or even mill-hands, and under Mr. Young's guidance a goodly number of them have worked their way into professional positions, chiefly through the aid which he gave them in obtaining scholarships at the Royal College of Science.

### The Mineral-water Bottle Question.

In the Court of Session, Edinburgh, on July 20, G. & C. Moore and A. G. Barr & Co., aerated-water manufacturers, Glasgow, complained that R. & J. Weir, aerated-water manufacturers, Shettleston, had committed a breach of interdict. In October last Lord Pearson granted interdict against the respondents using bottles embossed or moulded with the complainers' name, and in the petition it was averred that the Messrs. Weir had on several occasions been guilty of breach of interdict. The respondents were found guilty, but, as the offence was not considered a gross one, they were admonished and found liable in expenses.

### Edinburgh Pharmacy Golf Club.

The final tie of the T. & H. Smith golf challenge trophy was played at the Braid Hills course on July 23, when Messrs. John J. Sutherland and A. C. Aitken clearly demonstrated their superiority over their opponents, Messrs. W. Butters and J. Cochrane. The winners were 5 holes to the good at the finish of the round.

MESSRS. BERDOE & Co., valuers, of 35 Jewry Street, E.C., inform us that they have no connection with the firm of Berdoe & Leigh, mentioned in our issue of last week under the heading "Gazette."

## South African News.

(From our own Correspondent.)

MR. J. A. MATHEW, whose portrait we give, is the new President of the Colonial Pharmacy Board and ex-President of the Pharmaceutical Society of Cape Colony. He is colonial born, and passed the Medical Board examination in Cape Colony in 1858, after serving an apprenticeship of five years. In 1859 he left for England with the object of passing the Minor and Major examinations of the Pharmaceutical Society of Great Britain, which he accomplished the same year, after a course of study at the Society's school in Bloomsbury Square. Upon his return to the colony he took over the business of the British Dispensary in Adderley Street, and eventually established the present concern of Heynes, Mathew & Co., as wholesale and retail chemists and druggists. To meet the requirements of extending business the old premises were demolished and the present structure was substituted four years ago. Mr. Mathew has paid two



MR. J. A. MATHEW.

visits to the old country since obtaining the Pharmaceutical Society diploma, and renewed his acquaintance with old associations in Bloomsbury Square. He was the first South African to qualify as a member of the Pharmaceutical Society of Great Britain. The present firm consists of Mr. Mathew, sen., and his two sons. A younger son has taken the Cambridge M.D. degree, and is now practising in the colony.

MR. T. WELSH, chemist and druggist, formerly with Messrs. Duncan, Flockhart & Co., Edinburgh, died at Beaufort West on June 30 of heart-disease. Mr. Welsh came out to South Africa quite recently to join Messrs. P. J. Petersen & Co.'s staff, but he was compelled to try a change of air, and died while away on holiday.

TROOPER A. F. WOOD, writing from Pretoria on June 26, wishes to be reported as "progressing favourably." His many experiences are as exciting as they are various. He fought the Boers at Mafeking side by side with his brother, and it was while trying to bring his wounded brother in that he was captured, afterwards finding his way to the Waterval, near Pretoria. On April 24 the military authorities informed us that he was down with typhoid fever, and our representative immediately caused to be sent money and warm clothing. Nothing more was heard of him till June 27, when we published a cable from Cape Town stating that he was



still alive. He was seven weeks in the Pretoria Hospital, but from all accounts every kindness and attention was shown him by the Boers.

**MEDICAL ADVERTISING.**—The Cape Branch of the British Medical Association have sent out a circular to the medical profession which is being given wide publicity to the following effect:—The increasing prevalence of advertising by medical men having been brought to notice, has been carefully discussed by the Council and by the Association, and the following has been drawn up for a rule:—

Advertising either in the newspapers or in any similar agency is forbidden to members of this Association, and no person shall become or remain a member of the Association who after investigation by the Council has been adjudged to have been guilty of such advertising; provided that the provisions of By-law V. shall apply to such person so judged.

In order to put a stop as far as possible to inspired paragraphs and personal notices in the newspapers, it was also resolved by the Association:—

That the Secretary be instructed to furnish a report of the decision arrived at by this Branch on the subject of medical advertising to the local newspapers: further, that he be instructed to write to the editors of those papers requesting them to refrain from publishing personal paragraphs without the consent of the medical men concerned.

It was further agreed to send the same to the Colonial Medical Council, praying for its co-operation. Lastly, it was agreed that all members of the Association should be asked to draw the Secretary's attention to infractions of the rule, in order that they might be dealt with by the Council of the Association.

**FROM BULUWAYO** a Rhodesian subscriber, writing to our Cape Town correspondent, describes his trials on a journey up from Beira to Salisbury by train, and then on to Buluwayo by coach. The train had an unpleasant way of occasionally leaving the line; and later in the journey the coach-driver lost his way on one occasion, and they were stuck in a spruit holding 3 feet of dirty green water at 2 o'clock in the morning, and all had to set to and unload the coach of mails and baggage. Except for a stop of an hour or so for food at wayside places, the journey is made right through without rest. Our correspondent left Salisbury on Friday night, and arrived at Buluwayo on Tuesday morning tired out, as sleep was quite out of the question on the road. We append a copy of the present system of payment in Rhodesia, silver coinage being scarce:

**THE CIVIL COMMISSIONER, BULUWAYO.**

Please pay in cash to the person producing this card the face-value of the stamp affixed thereto, if presented on or after the 1st August, 1900.

This card must be produced for redemption not later than 1st October, 1900.

H. MARSHALL HOLE,  
Secretary,  
Administrator's Office.

Coupons such as this are issued for 3d., 6d., 1s., and up to 10s., and are stamped on the reverse side with their value in postal-stamps.

**CAPE PHARMACY BOARD REPORT.**—In the annual report just issued it is notified that the vacancy caused by the resignation of Mr. W. F. H. Pocock was filled by the election of Mr. W. F. Mager, of Queenstown, previously a member for six years, and that Mr. J. H. Mathew has been elected President of the Board. In respect to the new Pharmacy Amendment Act, the Board records its appreciation of the very fair manner in which the Medical Council had met its wishes on matters upon which they had so long disagreed. The Board note the satisfactory change for the better in the matter of the employment of unqualified persons in chemists' shops since the promulgation of the new Act. No recommendation has yet been made as to the alteration of any of the formulæ of B.P. preparations to meet the special climatic conditions of the colony, as authorised by the fifteenth section of the Act by proclamation of the Governor, but steps will have to be taken to legalise such alterations as chemists and druggists have found it necessary to make in some of the drier portions of the colony. Ten chemists and druggists were registered during 1899 (the smallest number in any year since the constitution of the Board), and of

these eight had been registered in Great Britain, one in Germany, and one had passed the Board's examination. Three candidates presented themselves for the Board's examination, and all failed. Finally, attention is drawn to the fact that reciprocity of examination is in vogue with the colony of Victoria, and negotiations are now proceeding with other colonies to attain the same end. [Since this report has been issued it has been arranged that the holders of examination certificates issued by the Pharmacy Board of New South Wales shall also be entitled to registration in Cape Colony.]

**CAPE MEDICAL COUNCIL REPORT.**—The annual report for 1899 of the Medical Council for Cape Colony States has just been issued. The membership of the Council has been increased to nine, and Dr. W. Johnston has taken the place of Mr. Strickland as dental member, the latter gentleman retiring after many years' service. Thirteen ordinary meetings, one special, and twenty executive committee meetings have been held. The special meeting was for the purpose of considering the Medical and Pharmacy Act Amendment Bill, which has since been introduced into the Cape Parliament and become law. The report states this to be a welcome addition to the statutes, as it remedies many defects in the existing law. Sixty applications for registration as medical practitioners were considered during the year, and of these only two were refused, the registration showing an increase of five over the preceding year. Four midwives and twenty-two trained nurses presented themselves for examination, and all the midwives passed and fourteen of the nurses. Eight midwives and four trained nurses received registration on presentation of diplomas or certificates. By alteration in the regulations the Council will now accept the registration-certificate of Great Britain only when the applicant's name appears in the current register of Great Britain. In other cases the original diplomas must be submitted. Two cases of infringement of the Medical Act by unlicensed persons were brought to the Council's notice, and in one case conviction was followed by a heavy penalty. Two persons were also convicted of illegally practising dentistry, and fined.

## Business Changes.

Notices are inserted free in this section if properly authenticated.

MR. J. LAWRENSON, chemist and druggist, has closed his branch shop in Bridge Street, Manchester.

MESSRS. BOOTS (LIMITED) are about to open a new pharmacy in Wilmslow Road, Rusholme, near Victoria Park, Manchester.

MR. W. MIALL JONES (from Bradley & Bourdas, London) has opened a new chemist business at 33 Terrace Road, Aberystwith.

MR. R. T. SIMPSON, late with Symes & Co. (Limited), Bold Street, Liverpool, has purchased the business of Mr. W. Briggs, chemist and druggist, Cheapside, Lancaster.

MR. G. W. T. ARROWSMITH, chemist and druggist, has sold his branch business at Whitstable to Mr. J. Hall Roberts, who has managed it for some years past. Messrs. Judd & Manners effected the transfer.

MESSRS. J. SAVAGE & Co., wholesale chemists, Bradford, have removed to larger and more central premises at 10 Westgate Arcade. They have also taken new retail shops at 254 Manchester Road and 15 Little Horton Lane, Bradford.

**INDIAN OPIUM IN CHINA.**—During the past ten years the imports of opium into Chinkiang, China, have been gradually decreasing, not because the Chinese have ceased to use the drug, but simply because the Indian product has been driven from the market by the native variety, which is far more leniently taxed than the foreign drug. For years past the bulk of the Indian opium has been used for mixing purposes in order to fortify the native drug. In 1899, however, there was a marked increase in the import of the foreign product, the figures showing a value of 429,617*l.* against 278,986*l.* in 1898. This improvement was largely due to the failure of the native crop.

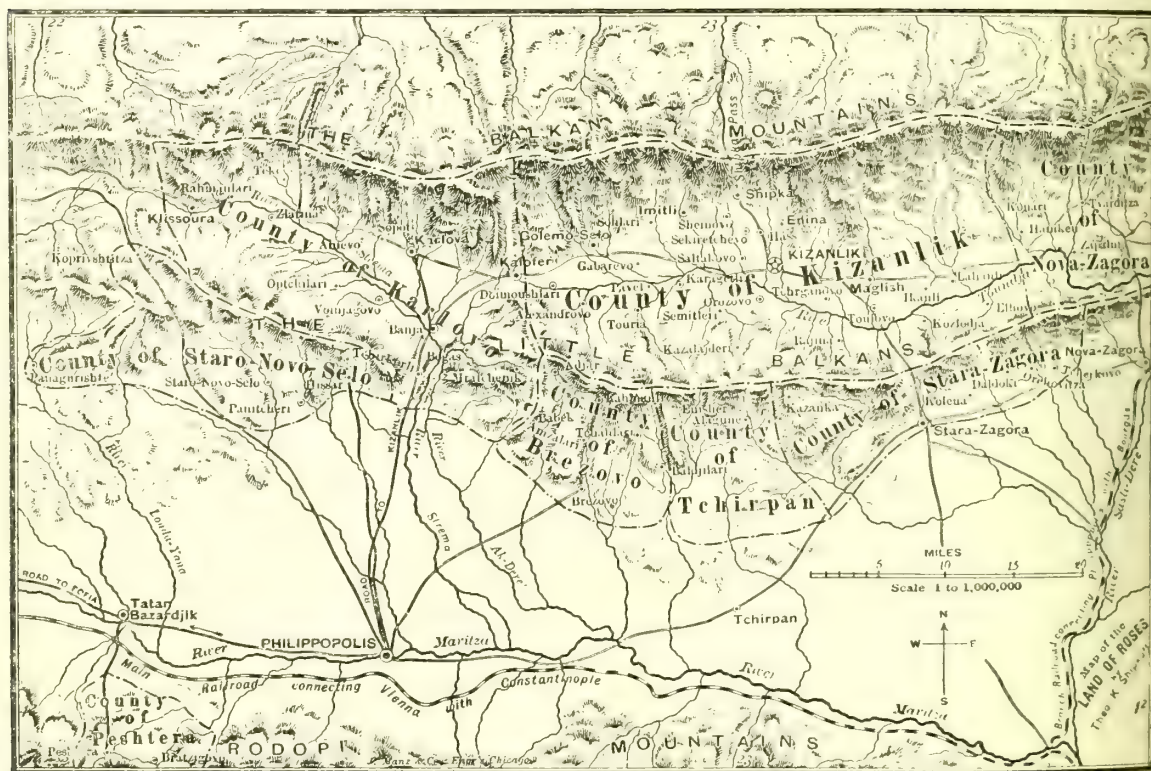


## Bulgarian Otto of Rose.

TO the specialist in essential oils in general, and otto of rose in particular, a trip through the rose-garden of the world, as Bulgaria has fittingly been called, has a distinct educational value. The time and opportunity for this, however, are not at the disposal of most of us, but it so happens that we were enabled to go rapidly through the whole of the rose districts whilst at the Paris Exposition without spending any time in material travelling. All we had to do was to follow the Street of Nations until just opposite Spain we found the Bulgarian pavilion. A fountain of rose-water, continually playing, diffuses the queen of scents into the surrounding air, and we are now face to face with the rose-gardens—condensed, it is true, but still there. The place of honour has been assigned to Messrs. Shipkoff & Co., who have their large and handsome showcase in a prominent

Paris, or New York, for example, is almost invariably a blend. The fine distinctions in the aroma of otto of roses are not in the least understood chemically, and it would probably require very large quantities of the otto to enable one to separate any of those subtle bodies which certainly exist in minute quantity in the various samples.

Samples No. 1 to 6, following the numbers assigned to them by the exhibitors, were chiefly of commercial interest, as they represented the bulk exported for the last few years. No. 1, however, was of somewhat special interest, as it was a sample of the bulk exported in the year 1885, and which, with the exception of a faint darkening of colour, had shown no sign whatever of deterioration. Stored in the cold and in the dark, and with air excluded, otto of rose will keep unchanged almost indefinitely. Samples 7-36 were types from all the important rose-gardens in the chief canton of the country—Kizanlik. Here one may broadly divide the samples into three types—(1) those grown to the north of the Kizanlik Valley, at the foot of the southern chain of the



MAP OF THE OTTO OF ROSE COUNTRY.

position in the pavilion just opposite the doors. As a mere exhibit of otto of rose one might easily have stopped to remark: "There must be a thousand ounces or so of otto there," and pass on; but there were features about this exhibit which invited longer inspection. In the showcase Messrs. Shipkoff exhibit over a hundred samples of otto of rose, all of which are different in origin, each having some characteristic of its own. Every rose district in the Balkans is represented. The great interest lies in the fact that every sample was distilled to the special instruction, and in nearly every case under the personal supervision, of Mr. Theodore Shipkoff, who was thus enabled to guarantee the authenticity of every sample exhibited. The main point of interest (which was so apparent after a short examination as to enable us to easily understand Mr. Shipkoff's statement that he could identify the district from which a given sample was produced with his eyes shut) was the marked difference in odour which samples from various districts possess. The peculiarities of any given sample, which are undoubtedly due in the main to differences in soil and climate, are not noticed on the markets, for the otto of rose which reaches London,

Balkan hills (e.g., Kizanlik itself, Shipka, and Imittli); (2) those grown at the foot of the north-western hills of the Little Balkans (Sredna-Gora), such as Alexandrovo; and (3) those grown in the valley towards the east of the canton (such as Toulovo). In general the otto gathered from these districts may be described as possessing the following characteristics:—The congealing-point varies from  $19^{\circ}$ – $21^{\circ}$  C., and the sp. gr. from 0.848 to 0.855. These variations are, of course, in the main dependent on the quantity of stearoptene present, which varies according to the number of white roses mixed with the red during distillation. The optical rotation varies from  $-2^{\circ} 48'$  to  $-3^{\circ} 30'$ . The total yield of this canton varies annually from 700 kilos. to 1,000 kilos.

From Kizanlik we pass along the valley to the eastern district, Nova Zagora, where seven districts produce an otto which is quite characteristic in its aroma, and exceptionally fine. The annual production of this otto is only about 80 kilos., but this is found of great value in obtaining the blend so much liked by many leading perfumers. The congealing-point of this otto is fairly high, usually about



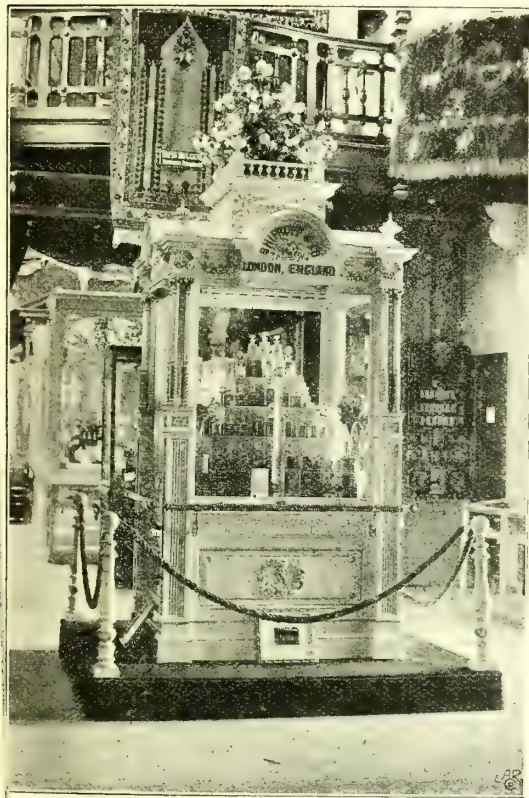
21°, with a sp. gr. 0.845-0.853, and rotation  $-3^{\circ}$  to  $-3^{\circ} 30'$ . We have not the note by us, but, speaking from memory, the white rose is rather more in evidence in this district than in the others, which would at once account for a higher stearoptene-content, from which a low gravity and high melting-point at once follow.

Passing through one of the defiles of the Little Balkans, we are now in the canton of Stara Zagora, the south-easterly canton of Bulgaria. Nine villages here contribute their quota to the national exhibit. The otto here (about 90 kilos.

villages furnish one of quite ordinary quality. The general physical characters of the otto of this district are as follows: sp. gr., 0.853-0.858; congealing-point,  $17.5^{\circ}$ - $20^{\circ}$ ; rotation,  $-2^{\circ} 30'$  to  $-3^{\circ}$ . Immediately to the south-west is the canton of Staro-Novo-Selo, and here we had five samples of a high-class otto, representing a total distillate of 110 kilos. per annum. The average melting-point here varies between  $19^{\circ}$ - $20^{\circ}$ , the sp. gr. 0.852-0.856, and the rotation from  $-2^{\circ} 30'$  to  $-3^{\circ} 12'$ .

The last of these local types exhibited covered four samples from localities in the mountain districts to the south-west of Philippopolis—Bratizgovo, Pechtéva, Tchanakchiévo, and Korarsko. These villages are situated in the canton of Peshtéva, and the otto (about 130 kilos. per annum) is of a very fine odour. The congealing-point varies from  $18^{\circ}$ - $20^{\circ}$ , the rotation from  $-2^{\circ} 30'$  to  $-3^{\circ}$ , and the sp. gr. from 0.853 to 0.856. The map reproduced gives, at least approximately, an idea of the relative importance of the various producing villages; the comparison is made by the size of the small circles indicating the position of the villages.

In addition to the samples to which we have referred, Messrs. Shipkoff show four samples of some special interest—viz. (1) green otto of rose, distilled by a single operation in the same manner as that followed at Grasse, instead of by a number of distillations of the water, followed in Bulgaria. (2) A sample of otto of rose distilled exclusively from white roses. This has a fine, characteristic odour, but contains an abnormally large amount of stearoptene. (3) A sample distilled from the petals only of the red rose. All the green parts of the plant were removed before the leaves were put in the still, and the resulting otto has a delicate odour, *sui generis et facile princeps*. (4) Otto distilled from the green parts of the flower only. The exhibit as a whole does a distinct service to the otto-of-rose industry, and perhaps even more to perfumers, to whom a typical collection such as this must be invaluable.



THE SHIPKOFF EXHIBIT.

per annum) is also exceptionally rich. The congealing-point is lower than that of the otto produced north of the Little Balkans, varying from  $18^{\circ}$ - $20^{\circ}$ . The sp. gr. is correspondingly higher—from 0.850 to 0.855—which points to a smaller proportion of white roses being distilled; and the optical rotation is  $-2^{\circ} 30'$  to  $-3^{\circ} 12'$ . Immediately to the west, still south of the Little Balkans, we come to the canton of Thirpan. This district with its five important villages, produces about 120 kilos. of very good otto, whose physical characters are in pretty close agreement with those of the otto from Stara Zagora. The congealing-point varies from  $18^{\circ}$ - $20^{\circ}$ , the sp. gr. from 0.852 to 0.856, and the optical rotation from  $-2^{\circ} 30'$  to  $-3^{\circ} 12'$ .

Still almost due west and we come to Brezova Canton. Here nine villages occupy themselves with the rose industry. This canton is usually recognised by connoisseurs as one of the best of the rose districts in Bulgaria. The annual production does not exceed 300 kilos. per annum, but the otto is very fine indeed. The general characters are, in the main, those of the other cantons situated south of the Little Balkans. The congealing-point is from  $18^{\circ}$ - $20^{\circ}$ , the sp. gr. from 0.852 to 0.857, and the rotation from  $-2^{\circ} 30'$  to  $-3^{\circ} 12'$ .

Proceeding north-west we come into the larger and more important canton of Karlova. Here, scattered over a stretch of some twenty miles, are no less than twenty-two localities which in all produce about 700-900 kilos. of otto per annum. The otto obtained in this canton is by no means constant in quality. Those villages on the high ground, surrounded by mountains, yield a very fine otto, whilst the low-lying

## Otto of Rose.

BY ERNEST J. PARRY.

THE question of purity of otto of rose has always been one of great difficulty, and of correspondingly great interest and importance commercially. In a letter to THE CHEMIST AND DRUGGIST, June 16, I took exception to several statements made in an article on the subject by Mr. H. Garnett, *C. & D.*, June 9. Various figures quoted from "The Chemistry of Essential Oils," which were referred to there, were not mentioned in that work as dealing solely with Bulgarian otto, but as covering German and French oils as well. In the present note I propose to restrict myself to Bulgarian distilled otto of rose.

In general, one can hardly claim to have had much opportunity of examining much otto of rose as it is distilled. It is impossible, in the first place, for the peasant to export the comparatively small quantity he distils, and the larger distiller, in the second place, cannot attend to sufficient ground to provide himself with all the leaves his export demands. Thus it is brought about that practically the whole of the otto that is exported (I am now referring merely to pure otto of roses) is a blend, and not the produce of any one district. The importance of this has apparently been overlooked in the British Pharmacopœia. It is, of course, a small matter to the Bulgarian dealer, for only a very small proportion of the otto produced finds its way into pharmaceutical hands, and pure otto can easily be blended, if necessary, to answer the B.P. tests. But the British Pharmacopœia would exclude a very great deal of genuine otto of rose if the samples from certain individual districts were examined from this point of view.

This comes about in the following way. In the first place, the British Pharmacopœia describes oil of roses as being the product of *Rosa damascena*. Literally interpreted, this would, I take it, debar practically the whole of the otto distilled at Grasse, Cannes, Nice, and Leipzig, for the rose used in chief is *Rosa centifolia*. But again, taking the actual wording of the monograph, most of the Bulgarian otto would not exactly



answer to this prescription, as the white rose, *Rosa alba*, is almost invariably used for hedges, &c., and the flowers are always distilled together with those of *Rosa damascena*. It seem quite unnecessary to specify the rose from which otto should be distilled. But this is by the way; the white rose is the point to which I wish to draw special attention.

During a recent visit to Paris I spent a considerable time examining the 100 samples of otto of rose in Messrs. Shipkoff & Co.'s exhibit. The point of especial interest about these samples is that they were distilled in the chief villages in which the rose-industry is of greatest importance, either by or under the personal supervision of Mr. Theodore Shipkoff, and whose purity he is personally able to guarantee. So excellent an opportunity of ascertaining new analytical factors rarely presents itself, and Mr. Shipkoff was good enough to offer me samples of these ottos in practically unlimited quantity. I chose half a dozen or so of those which presented more than usual interest, especially as referring to the white rose. The results of my examination of these samples are given below.

The chief point to which I wish to draw attention is the fact that whatever may be the limits in physical characters of otto of rose distilled from *Rosa damascena*, whether these are covered fairly by the British Pharmacopœia or not, these limits are materially altered by admixture with much otto from the white rose. Many districts grow white roses to a far greater excess than other districts. Hence the otto from the various villages have their own peculiar characteristics. The aroma of certain ottos is such that after a very small amount of practice an expert nose can locate an otto by its odour.

The first sample to which I would refer is an otto of rose distilled entirely from white roses, without admixture with a single red rose. This was produced by Mr. Shipkoff personally, and he was good enough to place about an ounce at my disposal. The chief characteristic of this otto is the high amount of stearoptene present. This is at once reflected in the congealing point and sp. gr. Its congealing-point is  $23.5^{\circ}$  to  $24^{\circ}$  (the pharmacopœial limits are  $19.4^{\circ}$ – $22.2^{\circ}$ ); sp. gr. at  $30^{\circ}$ , correspondingly low 0.8482 (pharmacopœial limits, 0.856–0.860); optical rotation for 100mm.  $-2^{\circ} 21'$ ; saponification value (per cent. KOH) 0.9. This otto has a very fine odour, and of its purity I am absolutely convinced. It is, however, outside pharmacopœial limits. Four other typical samples from individual districts gave the following figures:—

| —  | Congeaing-point. | Sp. gr. at $30^{\circ}$ | Rotation.        | Saponification. |
|----|------------------|-------------------------|------------------|-----------------|
| 1. | $22.5^{\circ}$   | 0.8510                  | $-2^{\circ} 46'$ | 0.81 per cent.  |
| 2. | $22^{\circ}$     | 0.8509                  | $-2^{\circ} 37'$ | 0.76 "          |
| 3. | $22^{\circ}$     | 0.8505                  | $-2^{\circ} 46'$ | 0.78 "          |
| 4. | $21.5^{\circ}$   | 0.8518                  | $-3^{\circ} 10'$ | 0.90 "          |

These samples were specially selected from districts where a larger amount than usual of white roses are distilled. They are all ottos of the finest odour and of authentic origin. To me, this shows the necessity of altering the B.P. limits for this article, especially as practically no authority is in agreement with them.

I was fortunate enough to find two other samples, one distilled from the petals only of the rose, the other distilled from the green portions of the flower only (ovary, &c.). The latter I have not yet received, but the former, "petal otto," is an oil of most exquisite odour, having a sp. gr. of 0.858 at  $30^{\circ}$ , congealing-point  $18.5^{\circ}$ – $19^{\circ}$ , and optical rotation  $-2^{\circ} 27'$ .

## Deaths.

ELLIS.—On July 19, Mr. T. W. Ellis, chemist and druggist of Loddon, in Norfolk. Aged 64. Death took place with painful suddenness, as Mr. Ellis had been to a flower-show in the afternoon, but in the evening he complained of feeling ill, and died almost immediately. He had been in business in Loddon for thirty-six years, and was one of the leading figures in the town, as in addition to fulfilling his

professional duties, he had for thirty years acted as postmaster, and the duties of this office he discharged with strenuous zeal. He had been identified with many public movements, and held various public offices, having enjoyed the confidence of all classes in the town and district. He possessed literary and artistic talents of no mean order, which in bygone years he had frequently employed for the edification of his fellow townsmen.

WELSH.—At Beaufort West, Cape Colony, on June 30, Mr. Thomas Welsh, chemist and druggist, formerly with Messrs. Duncan, Flockhart & Co., Edinburgh.

MORGAN.—At Barry Dock (Glamorganshire), Mr. W. Morgan, chemist and druggist. The late Mr. Morgan was a native of Pontypool and conducted a chemists' business at Abersychan, afterwards going to Barry Dock to manage the pharmacy of Messrs. Treharne & Co.

WARDEN.—On July 18, at his residence, 26 Highbury Grove, N., quite suddenly, Surgeon-Lieut.-Col. C. J. H. Warden, I.M.S. The late Mr.

Warden retired from the Indian Medical Service a little over a year ago, having joined it shortly after he took his M.R.C.S. and L.R.C.P.—the latter in 1873. He studied at St. George's Hospital, where he became particularly adept in chemistry; indeed, he was a Fellow of the Chemical Society before he was appointed to the I.M.S. in 1874. As chemical-examiner for Bengal and Professor of Chemistry at Calcutta Medical College he did much good work for the Service and for medicine generally. He was co-author with Dr. Dymock and Mr. David Hooper of the "Pharmacographia Indica," and wrote numerous papers on subjects connected with pharmaceutical chemistry. For some years before his retirement Mr. Warden was medical-storekeeper for Bengal—a position which entailed the superintendence of the extensive pharmaceutical laboratories of the Government in Calcutta. He was a thoroughly-competent practical pharmacist and an excellent organiser. He had been a corresponding member of the Pharmaceutical Society of Great Britain since 1893. His comparatively early death is much deplored by a wide circle of friends. The funeral took place at Highgate Cemetery last Saturday evening.

FENWICK.—On July 22, suddenly, Mr. R. H. Fenwick, for over twenty-five years in the service of Messrs. Ingram & Royle (Limited), 26 Upper Thames Street, E.C.

## Recent Wills.

ELLIOT.—The will of the late John Elliot, chemist and druggist, of Berwick-on-Tweed, who died on February 16 last, has been proved in the Newcastle-on-Tyne Registry by one of the executors, William Tait (nephew), power being reserved to the other executors, J. N. Weatherhead, solicitor, and Thomas Thompson. The testator bequeaths his furniture and effects and the sum of 50*l.* to his wife. There is also another bequest to his servant of 30*l.* The remainder of his estate is to be held in trust for his wife absolutely during her lifetime, and after her death (subject to an annuity of 52*l.* a year to his grandson, J. Milroy Elliot) for his nephew and executor, William Tait, merchant, of Tweedmouth. The gross value of the estate is 9,891*l.* 13*s.* 4*d.*, and the net personal estate is valued at 2,926*l.* 0*s.* 9*d.*

MALTBY.—In the Lincoln District Registry on May 8 the will of the late Alderman Joseph Maltby, J.P., chemist and druggist (member of the firm of Messrs. Battle, Son & Maltby), who died on March 7 last, was proved by the executors (Mrs. Lydia Maltby, widow, and Messrs. Wm. John Maltby, chemist, son, and Walter C. Street, chemist, Louth). The gross value of the estate is 9,583*l.* 6*s.*, and the net value of the personal estate is 5,160*l.* 15*s.* 11*d.*





## Pharmaceutical Society of Great Britain.

### JULY EXAMINATIONS—LONDON.

#### MAJOR.

THIRTY-TWO candidates were examined; 18 failed, and the following 14 passed:—

Baker, Cyril Henry  
Bathurst, Ernest Frank  
Bennett, Oswald Edward  
Boothroyd, Frederick  
Brown, John  
Buckingham, Frank Edward  
Hall, John William

Harris, John Flinton  
Kieft, Edward James  
Metcalf, Harry Railton  
Moore, Thomas Henry  
Pinchbeck, Gerald  
Plowright, Alfred  
Robinson, John George

#### MODIFIED.

Jones, William Henry, was examined, and passed.

#### MINOR.

Four hundred and seventy-two candidates were examined; 342 failed, and the following 130 passed:—

Abraham, Herbert  
Allen, Charles Trounson  
Archer, William Taylor  
Atterbury, William Richard  
Baker, Edgar Thomas  
Baker, John Austin  
Ball, Allan  
Barge, Francis John  
Barlow, Francis Robert  
Battershill, Frank Easton  
Beeston, Arthur Edward  
Bell, Albert Edward  
Berg, Albert Edward  
Blundell, Nellie Muriel Kate  
Bowling, William Henry  
Bradfield, Frank  
Broom, Frank Willey  
Brown, George Arthur  
Buchanan, Lizzie  
Burchinshaw, Robert Lloyd  
Buchnall, John Woodcock  
Butterfield, Harry  
Challenger, Ernest James  
Chambers, Maxse William  
Christopher, Richard Thorneycroft  
Clegg, John Willie  
Collins, Joseph Henry  
Cruickshank, John Grant  
Dance, Gilbert Abel  
David, Griffith Thomas  
Davies, Alfred Carey  
Davies, Alfred Robert  
Davies, David Lewis  
Davies, John  
Day, Reginald John Herbert  
Deal, William Henry  
Deane, Harold  
Deed, Arthur Edgar  
Delves, Charles Broughton  
Denton, Norwood  
Dick, Andrew Douglas  
Doran, Robert Sydney  
Evans, Arthur William John  
Evans, Samuel  
Evans, William Maurice  
Fell, Thomas  
Francis, Herbert Stanley  
Fullalove, William Arthur  
Furber, John  
Gatenby, Robert Smith  
Gaze, William Ernest  
Green, John Percy  
Greenfield, Harold Harper  
Grice, William Charles  
Griffin, Alfred Sercombe  
Griffiths, Richard Elliott  
Gurnell, William  
Watkin, Hugh Ross  
Hadfield, Fred  
Hall, Edward Percy  
Hampshire, Arthur  
Harper, John  
Harris, Percy  
Hellyer, William Woodmason  
Heslop, Charles William Baker

Higgins, Clement William  
Hinchliffe, Frederick  
Hirst, Thornton  
Holland, Frank William C.  
Horman, Charles George  
Hutcheson, James Cameron  
Jenkins, David Thomas G.  
Jewson, John Robert  
John, Owen Beynon  
Jones, John Elias  
Judge, Percy Procter  
Kennedy, George  
King, Herbert Henry  
Lawson, John  
Lawton, Ernest Aubrey  
Lee, Henry Cuthbert  
Leeming, Alfred Watson  
Lewis, John Lambert  
Lloyd, Morris Wyn  
Lord, Nettie  
McCallister, William  
Mikepeace, Harold Edward  
Marrow, Alfred Charles  
Martlew, Thomas Nicholson  
Nicol, Mary Craigie  
Paine, Frederick James  
Parker, Reginald Evan W.  
Parry, William Henry  
Peacock, William Luddington  
Peake, Walker Henry  
Peasgood, Harry  
Phillips, Henry Marcus  
Phillips, William Arthur  
Pickavant, Henry  
Plumley, Herbert James  
Plumtree, Percy Malin  
Powell, Charles Walter  
Purse, Alfred Henry M.  
Rainer, Charles Oliver  
Rawlins, Thomas  
Rayner, Edith  
Roberts, Lewis Ambrose  
Rogers, Edward Parsons  
Royce, Septimus  
Sanders, William Linthorne  
Smith, Frank  
Smith, Harry  
Smith, John Beddall  
Spurge, Herbert Stanley  
Stephenson, John Henry  
Stevens, Harold Blythen  
Storey, Francis Augustus  
Thomas, William  
Tippetts, John William  
Tristram, Ernest William  
Troughton, Charles Albert J.  
Vincent, Sydney William  
Vivian, Richard  
Walmesley, Stephen Elliott  
West, Harry Dawson  
Whiting, Ernest Milburn  
Wilkins, William Watson  
Wildler, William  
Woolcock, William James U.  
Young, Walter

## Outings.

The members of the Cambridge Pharmaceutical Association had an enjoyable trip to Hunstanton on July 19. The party consisted of the President and thirty-three members, and everybody seemed to spend an enjoyable holiday, favoured as they were by magnificent weather.

The annual outing of the employés of Messrs. Willows, Francis, Butler & Thompson, 40 Aldersgate Street, E.C., was held at Elstree, on July 21. The day commenced with a cricket match—Warehouse v. Laboratory, which ended in a win for the former by 10 runs. About thirty sat down to an excellent dinner at the Red Lion Hotel, and an enjoyable day was wound up with a smoking-concert, at which Mr. H. J. Willows made a most able Chairman.

The fourth annual picnic of the Newcastle-on-Tyne and District Chemists' Association took place on July 18. The party, which numbered about forty, left in specially-reserved carriages by the 2 P.M. train for Chester-le-Street, where they were conducted by brakes to Lambton Castle, the seat of the Earl of Durham. Here they joined hands with the members and friends of the Sunderland Association, who had driven over from the latter place. Light refreshments having been partaken of the party wandered through the park, viewed the extensive gardens and the Castle, and visited the vineries and hot-houses. An excellent tea was afterwards partaken of in the open, the weather being perfect. The stud-farm and yearlings were inspected after tea, and a very pleasant day was ended by the party being driven back to Chester-le-Street in time to catch the 8.20 train to Newcastle. The arrangements made by Mr. C. Ridley (President) and Mr. F. Gilderdale (Hon. Secretary) were excellent, and the outing was thoroughly enjoyed by all.

On Saturday last, July 21, the offices, warehouse, and works of Messrs. Parke, Davis & Co. were closed for the purpose of allowing the staff to have their annual picnic. A complete round of enjoyment had been arranged for by the committee, and a most pleasant day was spent. Starting from Waterloo at 10 A.M. the London party journeyed to Virginia Water, arriving there just before 11 A.M., where vehicles were in waiting to convey the merry crowd to the Wheatsheaf Hotel. The staff of the new laboratories at Hounslow joined the train at Feltham. Dinner was served at 12.30, and the manager, Mr. Fisk, who presided, dispensed with all speeches so that the party might lose no time in exploring the extensive grounds of the Royal Park near by and enjoying the beautiful sunshine which, being tempered by a lovely breeze, made life worth living after the boiling heat experienced in London during the few preceding days. Tea was served at 4.30, after which sports had been arranged which afforded no small amount of amusement. A large number of prizes—given by the management and the various heads of departments—were presented, after which the party wended its way to the station. The Hounslow portion detrained at Feltham, and the remainder journeyed on and arrived in London at 9.45.

The employés of G. B. Kent & Sons (Limited), Farringdon Road, E.C., held their annual "Beanfeast" at the Pavilion, Brighton, on July 21. The chair was taken by Mr. G. Harold Kent, who was supported by Mr. Ernest Neild Kent, and Mr. C. F. Barrett, directors. The Chairman having proposed the "Queen and Royal Family," Mr. Cholmondeley Wood gave the "Limited Company" (G. B. Kent & Sons (Limited)). Amidst the momentous and stirring events that were occurring in all parts of the civilised and uncivilised world, he said, the old "house" had not tottered, but still held its own—intact, firm, and progressive. The late firm had piloted the old ship well, and brought her safely into port without the loss of an anchor or the displacement of a spar. She had now started on her onward voyage altered a little in trim, but her motive power the same and her cargo "A1." In very appropriate language Mr. C. F. Barrett responded, and suggested the propriety of drinking to the old firm, which was done "with three times three" by the company. This toast was replied to by Mr. G. H. Kent and Mr. E. N. Kent, the former proposing "The Employés," for whom Mr. Wm. Benwell, who had been in the employ of the house for upwards of fifty years, replied.



## Our Town Traveller.

I AM glad to say that the rules of 42 Cannon Street as to the orthodox "blacks and topper" are not so rigid as to keep me within doors in this torrid weather. Mr. Powell's kindly thought for us is much appreciated. I understand that Mr. Michael Carteghe is the person whom the Editor referred to last week as wearing a suit of sober grey—"gay grey" I should have said, but it does not do to quarrel with an Editor. Like woman he is privileged. [We said "light grey."—EDITOR]. Mr. Carteghe's portly figure is peculiarly adapted to that suit, and his ruddy complexion, silver-grey hair, and Bond-Street style give it distinction. Now for myself. . . . [Chemists' specialists, not clothes, is the T.T.'s province, so we cut off the rest of the introduction, except one part which says that "everybody is complaining about business—either that they have too much of it, or not enough."—EDITOR].

### "SPARKLET" NOVELTIES.

There are exceptions to the prevalent grumbling at the continuance of the great heat. In the offices of Aërotors (Limited) at Broad Street Avenue, E.C., there was no appearance of heat-lassitude on my recent call, for everybody appeared too busy to think of it. Certainly the manager seemed to bear up cheerfully enough as he briskly took me over a few of the latest "Sparklet" introductions. There was a new double-sized bottle (holding rather more than a pint), with a corresponding double-sized "Sparklet," to be inspected, and a bottle with boggle cork affixed, which has the advantages of being easily fixed, easily opened, and allows the user to take a small quantity out of the bottle at a time and fix up again as tight as ever. Besides these, the firm are now putting up in cardboard boxes a selection of working-parts of the "Sparklet" bottle. This box is to sell at 1s. 6d., and will be an undoubted convenience to the customer. A 6d. box contains a dozen "Sparklet" washers. A new drink, "Kola Champagne," in powder form, has recently been added to the list, and the "Sparkletaris" tablet gives a product of somewhat similar composition to Apollinaris water. For advertising-purposes two show-bottles, 2 feet 9 inches and 3 feet 9 inches in height respectively, have been constructed, and these will be loaned to customers under certain conditions. The company are advertising their articles more extensively than ever, their busy manager hurriedly informed me, and they are doing their best to stop the cutting of their goods. The success of the "Sparklet" in the South African war has, as we all know, been phenomenal, and Aërotors (Limited) have just received (this was my last tit-bit) by far the largest order from the War Office which they have had during the entire campaign.

### THE BOVRIL BABY.

I had a pleasant chat the other day with Mr. Beable, a member of the staff of Mr. S. H. Benson (advertising agent, 1 Tudor Street, E.C.), who is responsible in some measure for the recent popularising of Virol. Since the subsidiary Bovril

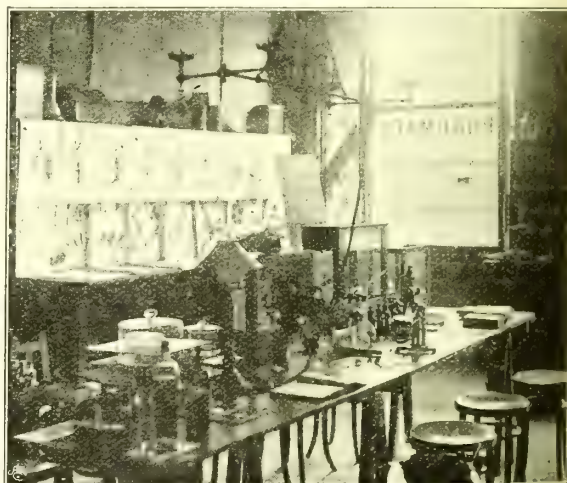


Company was formed to exploit Virol much has been and is being done in the way of poster and newspaper advertising to give that agreeable article a new lease of life, and Mr. Beable gives a rosy account of the flourishing condition of the Bovril baby and of the bright prospects of its future career. Certainly the records which he showed me of the extent to which the article is being placed before the reading public all over the country warrant hopes of a considerable return, and the fact that Virol is being used in every Children's Hospital in London shows that its nutrient qualities are appreciated by the medical profession. The combination of red bone-marrow, highly-diataseic malt-extract, eggs (with the lime representing the shells), and lemon-juice appears ideally nutritive and agreeable, and I was shown many testimonials from physicians speaking well of its value. One doctor records many cases of good results in his hospital experience, saying that the only objection

that he can find to the article is in the fact that a fastidious child here and there objects to it as being too sweet. Another medical man, who is even more emphatic in his praise of Virol, adds that he has 10,000 children under examination annually, and his opinion is therefore entitled to some weight. The sale and demand for the speciality are largely increasing. I suppose most chemists know what Virol looks like outside, but in the hope of catching one who does not know I give a portrait of it.

### SCHOLASTIC.

The Central School of Pharmacy (the latest venture of Mr. C. E. Sage, F.C.S., Ph.C.) is centrally and conveniently situated at 2 Charterhouse Street, E.C. When completed the school will consist of two large fine-lighted rooms (each about 30 feet by 20), with plenty of space and accommodation for the limited number of pupils which it is Mr. Sage's intention to teach. "I do not believe in having large classes," said Mr. Sage; "I intend to restrict myself to a certain number and to teach them thoroughly. I have been



very successful so far, having only had one failure in the whole course of my tutelage." Considering that Mr. Sage has coached many men during the past ten years the record is one to be proud of and one which he asserts he will do his utmost to maintain. He will be assisted by Mr. Mackenzie, who has been associated with him for some time, and students may be satisfied of a thorough training in all branches of chemistry and pharmacy. Mr. Sage has a special leaning towards electricity and bacteriology, and these subjects will not be amiss in the training of the pharmacist. The illustration shows a corner of the chemical laboratory, but gives only a faint idea of that spacious apartment.

### ANCIENT MORTARS AND MEDICINES.

The article on ancient mortars by Miss Florence Peacock in the Winter Issue has attracted considerable attention, and it is a peculiar coincidence that Mr. Marston, of Brewer & Marston, pharmaceutical chemists, 44 Coptall Avenue, E.C., who possesses a fine bell-metal mortar stamped "T. P. 1726," should know both Miss Peacock and Mr. Howlett's collection, of which she wrote. Mr. Marston is very proud of his hundred-and-seventy-four-year-old mortar, and justly so, for it is a splendid specimen. It rings as true as ever, is still in daily use, and is likely to be serviceable for the next generation or two. The business now owned by Mr. Marston was founded by Charles Roach Smith, a well-known antiquary, in 1832, and the firm have still all the prescription-books from that date in their possession. But they are also the owners of a greater curiosity than either of these, which I had the privilege to inspect recently—namely, Salmon's "English Physician, or the Druggist's Shop Open'd," dated 1693, and complete in ten books. The delightful quaintness of the book fascinated me. I learnt how "gun powder" of all sorts was made, and such things



as "sympathetical ink" and varnishes; but I am bound to add that, comparing it with "Pharmaceutical Formulas," it lagged behind in many of the recipes. The discovery of phosphorus, it appears, arose from observing the luminosity of the earth where puddles of urine had been standing. As is well known, urine was the source of phosphorus for years, and methods for making it are given in the book. One chapter deals with the parts of animals used in medicine. The various parts of the anatomy of *homo* yield quite an array of medicines, and some sixty animals were required to furnish other articles of the curious *materia medica* of our ancestors. It is laid down that millepedes, or woodlice, yield the same virtues as earthworms. Salmon ends the last of the 1,200 pages as follows:—"Thus at length, with much labour and pains, I have gone through and performed this so exceedingly needful, so much desired, so long waited for work, wholly new in its kind, and contrived in a practical method for the publick good, through the help of him who works and none can let, who makes a way in the sea and a path in the mighty waters, leading the blind by the hand and guiding them in paths they have not known."

#### LIQ. EXT. PERFUME CONC.

The little bird which puts me on the true scent for novel-ties told me that Mr. Paul Doumin (JEANCARD, GAZAN & DOUMIN, 13 St. Mary Axe, E.C.) had something worth noting, so I hastened to hear about the latest discovery at the Distillerie des Vallergues and the Usine de la Boca, at Cannes. Mr. Doumin first introduced me to one of his partners, Mr. Jeancard, jun., and then to a mysterious and preciously guarded leather case which had in it five small stoppered bottles, each containing syrupy liquids of varying colours and agreeable smells. Having smelt them consecutively and solemnly I discovered them to be strong preparations of violet, rose, jasmine, cassia, and orange flower.

"These," said Mr. Doumin, "are pure natural-perfume extracts prepared by our new process, and they are non-alcoholic."

I have been familiar with the distilled product since I was a boy, and have used the concentrated pomades and the concrete cakes; but this article appeared to possess qualifications superior to any of these, and Mr. Doumin was not slow to point out these superiorities.

"The drawbacks to the three processes hitherto used for making concentrated perfumes may be summarised thus," said he. "Distillation does not give the true perfume of the flower. Pomades (enfleurage), besides being very bulky, yield a comparatively small result, and if you add the possibility of rancidity, the enhanced freight (owing to the bulk), and the impossibility of estimating accurately the quantity of flowers needed for saturation, the disadvantages will be obvious. Then there are the strong and special odours of the 'greases' and 'resins' to be overcome, which are introduced to make the pomade more receptive, and the loss of alcohol (estimated at 15 per cent.) which occurs in the 'batteuse' or mixer."

"But what about the concrete perfumes, Mr. Doumin? They contain all the perfume of the flowers in a handy form, don't they?"

"True; but look at the hard unyielding mass you get, and the manipulation and mortar-crushing required before an alcoholic solution is obtained. Even then such solutions are difficult to clarify, and show a waxy deposit for long afterwards. To obviate this some manufacturers have tried the addition of ceresin and ozokerite, but that does not do away with the chipping and scraping."

"And these extracts of yours are quite soluble, are they?"

"Absolutely and instantaneously," he replied; "besides being quite limpid when the alcohol is added. These extracts (and they are non-alcoholic, mark you) do away with the ceresin and ozokerite, the constant and repeated exhaustions, and the icing. The tangible advantages to the perfume-compounder are—greater strength in a smaller compass (1 kilo. of this violet extract is equal to about 4 tons of pomade), the exact odour of the flowers, mathematical uniformity in strength, a pure perfume which contains no foreign or inert matter, and greater simplicity in manipulation."

A full series of these liquid extracts is to be put on the market at once, and it is expected they will create a revolution in the perfumery trade.

## Chemists 3 know.

By SIX-AND-SIXPENCE.



THE CHEMIST WHO SMOKE.

WHEN a customer goes in the Pharmaceuticus removes his pipe, cigar, or cigarette into one corner of his mouth, whilst he mumbles some unintelligible sentences to his customer, who generally escapes with half the errand done. This chemist's shop is more often than not tenanted by a habitual loungeur or two, lolling on the counter laughing and chaffing with him and keeping away the gentler sex. The chemist is generally a happy-go-lucky unmarried man, unshaven in face, untidy in person, and finishes dressing in the small hours of the afternoon. He is a good business man as a rule, and could easily make a competence if he cared to, but is satisfied to get a fair living with a minimum of work. He frequently locks his shop up for an hour or two whilst he visits the neighbouring billiard-table or wends his way to the cricket or football match. Life is generally all sunshine with him.



THE CHEMIST WHO STANDS AT HIS DOOR.

What a picture of slow trade he represents. With his hands folded under his apron he surveys every passer-by with a hungry look, as though he wonders to which of his opponents they are hurrying. He keeps customers from



coming to his shop by his appearance of indolent laziness. He steps out on the pavement to gossip with the policeman, the butcher, the baker, or anyone whose unlucky planet has sent him that way. While he gossips you will find some customer slips into his shop, wait awhile, then call the attention of the chemist by vigorously knocking on the counter. After being served the customer vows never again to go into *that* shop. The shop is always untidy, the carboys and bottles undusted, and the goods which came in a week before are scattered on the floor waiting to be packed away. The chemist who stands at the door is not a *tota avis*.



THE PECKSNIFF OF PHARMACY.

He generally flourishes in some main thoroughfare, has a well-fitted shop, scrupulously clean, recess-labelled bottles, highly-polished drawers, and all the necessary requisites for making a complete, up-to-date pharmacy. He smirks, he twists, and places his body in all sorts of ungainly postures, constantly washes his hands in imaginary water and dries them by waving them in the air when a "lady" or "gentleman" enters his shop. He serves him or her in his best shop style, carefully wraps the parcel in his best white demy, and seals with superfine sealing-wax, or ties it up with fine twine, pleads pathetically to be allowed to send the goods up, and finally bows his customer to the door. But, oh dear, the change in his manner when a poor customer enters. Sometimes he condescends to wait on his customer, but, as a rule, he turns her over to the youngest apprentice. To their tale of sorrow he listens impatiently and cuts them short. He elevates his aristocratic nose as though the very atmosphere reeked with their poverty.

## Pharmaceutical Veterans.

### William Brodribb Randall.

IN THE CHEMIST AND DRUGGIST, August 31, 1895, we were enabled to give some interesting details of the career of Mr. Randall, of Southampton. We have since had an opportunity of gleaning further particulars of the practice of pharmacy in the thirties and forties, and we give them as nearly as we can in Mr. Randall's own words:—

"My school-life was passed as a day-scholar at Mr. Bullar's, a locally well-known school far above the average in goodness at that period. I was destined from early times to join my father in our business, and this I looked forward to with eagerness. About the winter of 1837 an epidemic of influenza occurred, putting a severe strain on our staff, some of whom were laid aside by it.

"Then I was first called on to assist, and it was my

morning duty daily to prepare a batch of mist. amygdalæ in a great marble mortar, this being a favourite menstruum in prescriptions at the time. It was carefully examined as to the amount of sediment. After I was duly apprenticed (at Apothecaries' Hall, to serve my father) I remember another epidemic of influenza in which there was a great run on mist. morphinæ co., which was sold all day long over the counter. Then came a terrible scare—an attack of 'cholera morbus,' as it was called. The town authorities organised a regular system of relief. On the first symptom of diarrhœa all were recommended—even commanded—to apply to the nearest chemist for medicine in the shape of mist. cretæ with tr. catechu and aromatics. This was given gratis to all applicants, and the bill sent in to the municipality. I remember one chemist making a house-to-house visitation over a crowded district, where he found material for a long bill, which was duly paid and was earned. We had at the time (by agreement) to keep the shop always



MR. WILLIAM BRODRIBB RANDALL.

open, and a qualified medical man attended there through every night to deal with bad cases making application. Of course an assistant dispensed his prescriptions.

"About this time we put in stampers for powdering drugs, and steam stills and pans for manufacturing purposes, and so by degrees the business grew, as it had done since 1795, at a time when there was no competition by educated men, and the public paid the prices asked without murmur if only they had confidence that the medicines were pure. I am afraid I cannot add many more details of my public life in connection with pharmacy to those I gave you on a former occasion. As I mentioned then, while studying at University College I was private pupil to Mr. Warrington, of the Apoth. Hall. He had just succeeded as 'chemical operator' there to Mr. Hennel, who was killed by an explosion of fulminate of mercury which he was manipulating in the court. He was literally blown in pieces. Mr. Warrington was an accurate and painstaking teacher, though overburdened with commercial work which took him out a good deal. We worked in the 'test-room' with few incidents. But



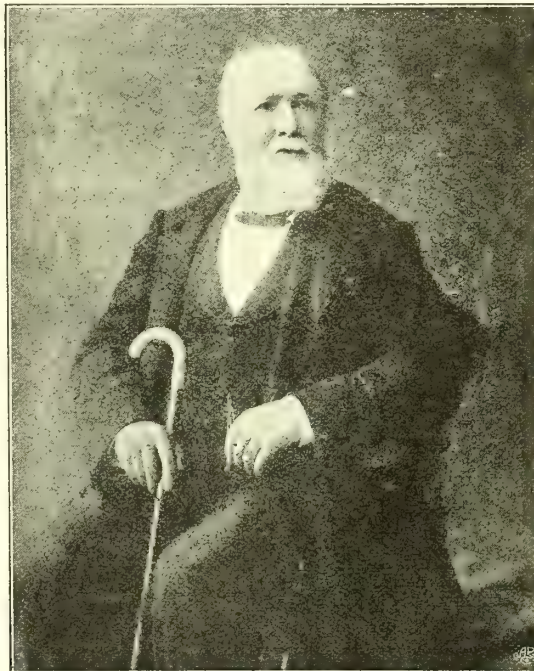
ere is one. Mr. Lloyd Bullock had just published the first volume (I think) of his translation of Fresenius's "Chemical analysis." It was favourably received by the press, with one exception—I forget which—but he was annoyed and thought unfair. One day he suddenly presented himself in the best-room, asking Mr. Warrington if he had seen the peccant notice. 'Now,' he said with conviction, 'I know what Job meant when he said, "Oh, that mine adversary had written book" (Job xxxi., 35);' he meant then I would have reviewed

"I was on the Council of the Society from 1865 to 1870—two terms. I did not seek re-election partly because Mr. Reynolds, of Leeds, had said that members should not stay on so long but give place to others. I was impressed with the soundness of this advice, but I understood that it was aimed at veterans like Squire and Morson, whom I deemed to be very proper exceptions; so I made room for a successor and took up more congenial educational work in my native town. Messrs. Squire and Morson, also Mr. Macfarlane, of Edinburgh, always impressed me with their thoughtful, sagacious advising, and, in another way Mr. Edwards, of Dartford. I sympathised with the London men's anxiety to keep up the dignity of our calling, but I knew too much of the struggling provincial chemist's life (from calling on them commercially) not to see that they could not afford to feel thus. I remember once assenting, in the course of debate on this subject, that to my mind the instance given of a druggist in country town, who was obliged to supplement physic by darning in dress (probably under his wife's care), actually giving a 'dress extende' hung dangling outside his shop window, was not so injurious to our common reputation as the conduct of the man who substituted some other so-called 'genuine' chlorodyne for Dr. J. Collis Browne's. We used to discuss very freely from 11 to 1, and a little before 2, till our agenda was exhausted, the interval being taken up by much and very pleasant social intercourse. The first time I was present I had some difficulty in obtaining a glass of water (being a total abstainer), and I was never again allowed to indulge in so dangerous a drink—a bottle of seltzer being always on hand for my benefit. Mr. Hills, so long our Treasurer, exercised a very genial influence by his hospitality. After a meeting he would get up a little friendly dinner-party at his private house—always seating us at a round table with all on an equality, and while eating us sumptuously, made all feel at home. As you see, I fell in now and again with famous men, but had no converse with them worth recording, even if I could remember it. I always stood in awe of such men with their stores of accurate knowledge and power of thought, and I was as a grasshopper in my own sight."

### Andrew Malloch Robertson.

The subject of this sketch was born at Perth in 1827. He received his early education at Perth Public Schools, and in 1842 entered upon a regular indentured apprenticeship of five years as a chemist and druggist with the late Mr. D. Fleming, surgeon, Perth. The salary of the aspiring chemist was 5*l.* for the first three years, 15*l.* for the fourth, and 20*l.* for the fifth year, and during the first four years of that time Mr. Robertson was never absent, he informs us, from business for a whole day (Sundays included) from 8 o'clock in the morning until 9 at night. Having finished his apprenticeship, the young man obtained a situation with the late Mr. John Robertson, wholesale and retail chemist, 84 Queen Street, Glasgow, travelling from Perth to Glasgow by stage-coach (this was in 1847, before the era of railways), and entering directly upon his duties on the evening of his arrival. One of the first things he had to do was to make 40*z.* of chloroform for the Earl of Glasgow's factor, who was using the new anæsthetic as a humane means of destroying horses too old for work. This must have been about the first chloroform manufactured in Glasgow. About the time Mr. Robertson felt that his early education was inadequate for the career which he contemplated, so he set to work in the evenings to remedy the defects. He remained in the Queen Street situation for three years, when, seeing a good opportunity for commencing business at the Cross of Anderston, Glasgow, he took over, in 1850, the business at 27 Main Street (Anderston Apothecaries' Hall), which he still retains. For the first few years he had to struggle, and

the newly-fledged chemist was often in despair. Three to four pounds a week was the total sum that the business seemed likely to produce, but Mr. Robertson stuck to it, and at the end of the first year he found he had made 22*l.* 10*s.* clear profit. This increased to 68*l.* in the second year, and 120*l.* in the third, whereupon he thought of a wife. In 1853 he married, "and we are still enjoying our honeymoon as happy and jolly as we were forty-seven years ago," writes this robust veteran. By that time he was able to engage an assistant, and joined various other Glasgow chemists in breakfasting



DR. A. M. ROBERTSON.

Jacob Bell when on his Scotch tour. Mr. Robertson was among the number who joined the Society as a result of Bell's advocacy, and he remained a member until 1858. In 1855 he employed an assistant and an apprentice and so was able to attend Glasgow University classes with the object of becoming a pharmaceutical chemist by examination; but his ideas enlarged as time went on, and eventually, in 1860, he graduated as a physician and surgeon. He soon became possessed of a good general practice, but retired from medical practice a short time ago. He still retains, however, his pharmacy with consulting-room attached at the Anderston Apothecaries' Hall, where he also conducts the affairs of the Scottish Sugar-coated Pill Company, established by him in 1887. Dr. Robertson is now in his 74th year, and says that photography and golf have been his two main hobbies. He is the only surviving original member of the Glasgow Golf Club, and can still handle a club with many a younger member. Though a medical practitioner, Dr. Robertson always retained his attachment for pharmacy, and was from 1864 to 1866 President of the Glasgow Chemists' and Druggists' Association. It is somewhat singular that Mr. W. L. Currie—"one of my rearing," as Dr. Robertson puts it—should be President of the Glasgow Association at the present time.

STAR ANISE to the value of 31,342*l.* was exported from Wuchow, China, in 1899, against 15,024*l.* in 1898. The exports of galls declined from 98,400 lbs. in 1898 to 67,467 lbs. in 1899.

THE scenic, antiquarian, and other attractions of the "East Neuk of Scotland" are set forth in a co-operative work "Petri Promontorium; or Peterhead the Howes of Buchan," published at the "Sentinel" Office, Peterhead. The chapter on the "Mineral Wells" of the district has been contributed by that versatile pharmacist, Mr. J. F. Tocher, F.I.C., Ph.C., of Peterhead.



## The Pharmaceutical Aviary.



### The Secretary Birds.

These two birds take flight together to all parts of the kingdom. This week they have flocked with many other birds into the Square aviary, where there has been great cackling, flapping of wings, and winking of eyes. These secretary birds are great at arranging things. They feel the crops of the birds that are good at seed-picking, and get them to bring their best to display in the centre of the aviary. Nature has gifted them with long bodies and legs for wading through the sea of troubles which surround the B.P.C. The smaller bird to the left is game, and when any fighting is on it does it. It feeds on cascarilla and roosts with the hearon. The other bird thinks a lot, and smooths its mate's feathers when they get ruffled, but does not cackle often. It is philatelic and domesticated. Likes green extracts and Hitchin herbs best as food.

## New Books.

Manly, T. *Ozotype: New Carbon Printing-process.* 7 $\frac{1}{2}$  × 4 $\frac{1}{2}$ . Pp. 78. Limp. 1s. (Hazzell, Watson.)

Mitchell, C. A. *Flesh Foods: Methods for their Chemical, Microscopical, and Bacteriological Examination.* Illus. Coloured plate. 8 × 5 $\frac{1}{4}$ . Pp. 352. 10s. 6d. (Griffin.)

Standage, H. C. *Leather-workers' Manual: Compendium of Practical Recipes and Working Formulae for Curriers, Boot-makers, &c.* 8 $\frac{1}{2}$  × 5 $\frac{1}{2}$ . Pp. 176. 7s. 6d. net. (Scott, Greenwood.)

Symes, J. O. *Bacteriology of Everyday Practice.* 7 $\frac{1}{2}$  × 4 $\frac{1}{2}$ . Pp. 90. 2s. 6d. net. (Baillière.)

CARBOLIC ACID.—In their price current this month Messrs. Zimmermann remark that the high prices which were asked for by the English makers of crude have, as was expected, prompted some of the continental makers to prepare the acid synthetically. This very important factor will, no doubt, bring home to the makers of both crude and refined that the value of carbolic is after all, more limited than they suspected.

## Observations and Reflections.

By XRAYSER.

STUDENTS OF PHARMACY who may still find themselves unsatiated with science, may secure a further meal of a very filling character if they cross to Paris for the International Pharmaceutical Congress to be held in that city from August 2 to August 8. The published agenda seems to comprise some valuable contributions, though it is impossible to judge from the titles. Continental investigators have a rare talent for clothing very small discoveries with a vast envelope of verbiage. There have been eight previous international congresses, and in countries where the governments have been complaisant enough to bear the expense, reports of the proceedings have been issued in volumes of gigantic bulk. But I do not recall any discovery or any observation of permanent value to pharmacy which can be traced to any one of these congresses or is enshrined in any of these records.

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NO PAPER IN THE ENGLISH LANGUAGE is announced for the Paris Congress, and it is possible that no word of English will be spoken there from the beginning to the end of the proceedings. British pharmacists, indeed, have never seemed quite at home in these congresses. They are scarcely able to sympathise with the enthusiasms and aspirations of their continental colleagues, and these look on them with some curiosity not unmixed with pity. From the point of view of the mere visitor to the Paris Congress, it is to be regretted that discussions concerning "La Spécialité" are to be barred. That is the one topic which stirs every French pharmacist, and draws out whatever eloquence he is capable of. The good old "International Pharmacopœia" still holds a place on the agenda, and the well-worn platitudes about its immediate necessity will no doubt do duty once again. British pharmacists have long ceased to regard the idea as a realisable one, but there must still be some people of inexhaustible faith among the organisers of the Congress. Whatever the papers or the discussions may be, the entertaining is sure to be well done, and the marvellous exhibition surroundings are a liberal education in themselves.

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FRENCH PHARMACIENS are *savants* by tradition. Many famous scientific men have been drawn from their ranks, and they themselves, and the public generally, implicitly accept their scientific reputation. It is not, I think, uncharitable to add that 90 per cent. of them now trade on it. No one I think can even glance at their windows in Paris and other large cities without seeing how rampant is the spirit of commercialism, not to say quackery, among them. The windows of most of the pharmacies are packed with specialities, and generally there are placards recommending this or that wine or elixir or syrup in the most extravagant terms as a certain cure for diabetes, consumption, gastralgia, neuralgia, or some other constitutional disorder. Wines for the cure of various complaints are offered in a pharmacy on the chief boulevard at 30 centimes the glass. In another pharmacy, a large, handsome one, two fine windows are well stocked with a great variety of "beautygene" preparations for the cure of pimples, wrinkles, superfluous hairs, and all sorts of skin troubles. "Cachets contre l'obésité" are also among the attractions shown. Another large pharmacy in a swell quarter offers, by a placard in the window headed "Prime gratuite," that the production of tickets of cash purchases to the amount of 20 francs (except for specialities or mineral-waters), will entitle the holder to a bottle of eau-de-Cologne of extraordinary fragrance. Such are the characteristics of



nearly all the pharmacies in Paris. Medicinal wines are the most prominent remedies displayed. There are perhaps nearly a dozen historic pharmacies in the city where the display of specialties is rigidly eschewed; but in most quackery of what we should regard as of an unskilful character is strikingly prominent.

\* \* \* \*

LAST WEEK'S NEWS offers several topics for comment, but my space will only allow me to mention a few items very briefly. Page 78: The protests against Clause 2 from Exeter, Halifax, and Bradford only serve to bring into relief the general trade indifference to the whole business. The Council's circular demanding a vigorous opposition to the clause seems to have fallen very flat indeed, as such a backboneless production deserved to do. Page 79: If July 12 was one of the days of the hot wave, I can readily believe

"the assistant's dive" depicted by Mr. Fred Reynolds, though I am surprised that the syphons should have been found in the flood keeping their position as faithfully as they did on the burning deck. But I understand that Mr. Reynolds does not claim photographic accuracy for this detail. But the street scene he saw, and represents just as

I saw it. Mr. Reynolds, we all know, is a veritable Adashaw for accuracy. He never exaggerates. But that wave, or waterspout, or whatever it was, and the big crab blowing it! They strain our faith in F.R. to almost the breaking point. Page 81: No British Vice-President at the International Congress of Pure Chemistry at Paris. Yet British chemists have done more for pure chemistry than any other nation—an assertion which I cannot now stay to prove. Page 82: I hope the Congress chemistry was better than its conundrum. Page 83: Can there be any substantial reason why particulars of the pharmaceutical examinations should not be procurable at the Society's branch office at Edinburgh? Perhaps it would not be altogether expedient to trust the distribution of the often-changing particulars to local secretaries generally, but the Society's own staff at its own house, where the examinations are held, ought surely to be competent to supply all necessary information. Pages 84, 85: If the two portraits of Professor Candler represent, as I presume they do, the same distinguished individual, I beg to offer my congratulations to the professor's more recent hairdresser. Page 87: Do not let be forgotten that Mr. Joseph Wilson Swan "M.A., F.S., President-Elect S.C.I.," is also a chemist and druggist.

\* \* \* \*

THE CORRESPONDENCE COLUMNS OF THE CHEMIST AND DRUGGIST have always been the debating-hall of the trade. I take the liberty of joining in the discussions raised, and may remind those writers with whom I may not happen to agree of my subsequent discomfiture when I attempted to correct somebody's Latin. I am generally right in my opinions, but there is no guarantee of infallibility. Mr. Alcock offers henbane-plants to chemists who would like to grow them. This is good of Mr. Alcock, but it is not certain that it will be to the benefit of patients if pharmacists should make their tinctures or extracts from plants grown in close baggardens. Wide open spaces and plenty of sunlight are as necessary for the development of the medicinal virtues of plants as they are for the proper development of odours and colours. Mr. Williams's correction of the "tynwald" reference is interesting, especially his statement that "the ceremony is tynwald." Tynwald, I find, is an old Icelandic compound of "Thing" (parliament), and "Vollr," which is our old, or the now more familiar Dutch veldt. It is curious that the term designating the locality should have come to mean the ceremony. I cannot add anything to Mr. Fletcher's letter about tinctures. I am glad

he does not allege that the substitution of 0.835 for 0.910 was a printer's error. I do not sympathise with the proposal of "X. Y. Z." to raise funds so as to give a course of free instruction to unqualified compounders when they return from South Africa. These men deserve our thanks and the thanks of the country. But men who have roughed it in the veldt as they have done will hardly mind Galen Place, and they are not the sort of fellows, I judge, who would care for any of our charity. Young "Mars" is right to have ambitions, but he is not wise to parade them. There are no doubt better businesses than pharmacy, but "Mars" will find that in whatever sea he tries to catch fish he must not mind getting wet. I can only agree with one sentence in Mr. Powell's letter—that is, that the garb of chemists' travellers "seems a trifling matter." A polite and serious gentleman will be the same in black or grey; but it is just that kind of person who would not care to offend the susceptibilities of those on whom he calls for business by appearing before them in a loud golfing suit. And if prejudice exists, even though it be unreasonable, those who pay the expenses may not care for the additional cost of fighting it. Mr. Keen's letter to the Lord Chancellor is an admirable one. If fifty such pertinent, pithy, and pointed arguments had been sent to Lord Halsbury, we reformers would have done more for the future of the trade than the Pharmaceutical Council can possibly accomplish with its senseless blocking policy. I suppose Messrs. Turri & Co. were not aware when they wrote, that the title "Condy's Fluid" was a registered trade-mark. It is not likely they could get behind that in an English law-court. But is there any moral reason why they should? The patentees of Condy's Fluid cannot now claim any monopoly in the composition of the article, but it would surely be injustice to give other people the right to use the name also. Smith has the benefit of Mr. Condy's invention free: let him make "Smith's Fluid" a valuable title, as Mr. Condy did for Condy's Fluid.

### The Appropriate Powder.



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## Editorial Comments.

### The Conference Week.

At the present rate it is only three times in a century that  
chemists and druggists from all parts of the Kingdom  
drawn together in conference by that body known as  
British Pharmaceutical Conference. The second occasion  
was this week, and is in full swing at the time of writing  
that we are not in a condition to be critical, were we  
posed to be so, to a body which does more good work  
the furtherance of British pharmacy than it gets the  
stantial credit for, that can only be expressed in subse-  
tions. It would be a thousand pities if the B.P.C.  
to shut up shop for the lack of pecuniary support.  
Executive's report showed that its gains in membership  
during the year did not do much more than compensate  
the losses. We should be the last to say that the B.



serves this, as we feel that the lack of support is in part due to the satisfaction which retail chemists get out of the weekly journals of pharmacy. The Conference has an altogether wrong basis of subscription. An association or society should have support on account of the benefits which it confers upon the calling which it represents, and solely the British Pharmaceutical Conference, as a body representative of the interests of the pharmacists of the British Empire, deserves the 1,000% or so that is required to keep going. Its principles are those which are at the present moment so popular: they are Imperial. It professes to represent the Empire, and does so to some extent, but it does not go so far as it might, because it strictly adheres to technical matters, and most carefully avoids the business side of pharmacy. We know that there is an element of danger in introducing commercial and political matters into the programme of a body which is essentially technical; but the British Pharmaceutical Conference cannot overlook the fact that the fraternity of the chemists and druggists of the British Empire is an element in its constitution, and that because so there are subjects awaiting its consideration which, if taken up, would draw to it a larger measure of support. It may be made the helper of all the constituted pharmaceutical authorities of the Empire by taking up educational subjects, especially with the view to expediting reciprocity induction and examination, and by so doing it would take a position superior to that of any pharmaceutical body in the Empire. It may become, if it cares to, the Pharmaceutical Clearing House of the Empire. Much has to be done here that can happen, but since it is not fettered by statutory obligations, it is the only body which can undertake the work. Of the proceedings of this week's meeting little need be said here, since they are so fully dealt with elsewhere in this issue. But

#### THE PRESIDENTIAL ADDRESS

and the papers are worthy of emphasis. There is always an element of risk in appointing a specialist like Mr. E. M. Holmes to the presidency. It is that he may ride his hobby to the boredom of his fellow members. Happily Mr. Holmes has proved the rule by giving us the exception. He has ventured to be prosaic rather than prosy. We may even say, without offence, that he has succeeded in delivering a conventional address. Nothing could be more fitting for a 1900 Conference than a review of the pharmacy of the nineteenth century, but there are dangers in the subject which he has admirably avoided; while he succeeded, we think, as few could have succeeded, in grasping the significance of the epochal additions to our knowledge, and the departures in pharmacy from the traditional customs. The first paragraphs of the address glanced at the scientific progress of the century; then the President went on to speak about the material advance in pharmacy. Here he showed a high regard for the public services of trained chemists and druggists. Undoubtedly the ultimate purpose of applied pharmacy is to dispense physicians' prescriptions, just as it is the object of training in pure chemistry to perfect technical processes. But the conditions of the practice of medicine in England divide the dispensing of medicines to those who are imperfectly trained in pharmaceutical methods, so that we have the spectacle of nine-tenths of the medicine required for the treatment of the sick compounded under the supervision of persons who have already diagnosed the disease and prescribed the remedy. This condition is not the best; but the President did not say how it could be altered, except by the effort of chemists and druggists themselves in advising young medical men to try the more rational order of things. Here the medical-partnership system which obtains in England and Wales is a real deterrent of reform. From

this subject Mr. Holmes proceeded to discuss counter-prescribing, and what may be called modern medication in compact form; then he took up the Pharmacopoeia as a legal standard, and here we got a glimpse of the man who knows drugs well, for he said that the fear of the B.P. being taken as a standard for retail sales of drugs had led in some cases to a lowering of the medicinal standards. On this point it is well to remember that we had for a few years a steady effort on the part of pharmacists, or their representatives, to make the B.P. a universal standard, and we have only ourselves to thank for the inconveniences which followed that effort. The facts can never be hidden that the public expect that when they purchase medicines from those registered under the Pharmacy Act, they expect to get them of the quality prescribed by the highest authorities, and the Act is obligatory upon those registered to compound the medicines of the British Pharmacopoeia according to its formularies. Inferentially chemists and druggists should sell only such medicines, and depart from the standard only with due declaration of the fact.

Mr. Holmes's reflections upon the present condition of pharmacy gave little encouragement for what may be called the higher phase of the calling. For example, he rightly regarded the trade in proprietary medicines as a part of the registered chemist's business, because there is a public demand for such medicines, and it is the medicine-sellers' duty to meet the demand. The fact that these sellers are content to sell the products of others is, we may take it from what followed in the address, partly the result of the lack of commercial education in the chemist's voluntary curriculum, and he advocated the inclusion of a course of commercial instruction in schools of pharmacy. Thus, it will be seen, Mr. Holmes proved equal to adapting himself to an audience of business chemists, and the subsequent proceedings reflected his ability to discuss

#### THE PAPERS

which were communicated to the Conference. These were distinctly above the average of Conference communications. There was not much appearance about them of the hasty manufacture which is not an uncommon characteristic, and we understand that the Hon. Secretaries could have obtained many more had the time at the disposal of the meeting permitted further contributions. Some of the papers were exceptionally long, and only four were got through on the first day. It will be observed that the majority of them directly bear upon the revision of the British Pharmacopoeia, and in this connection the paper by Dr. F. B. Power, in criticism of the chemistry of the Pharmacopoeia, was the first to be taken, and it brought a reply from Dr. Attfield which was not taken too kindly. Dr. Power's criticism was expressed with commendable moderation, nevertheless he pointed out several scores of errors, most of which have hitherto escaped observation. The debate lasted over the luncheon-hour on Tuesday, and those who spoke subsequently to Dr. Attfield commended the communication highly and approved of many of the suggestions put forward. A great deal of work was included in Messrs. Moor and Priest's paper on the ash of drugs, but for thoroughness of research the papers which were contributed from the Tyrer Research Laboratories were the most important of those dealing with pharmacopoeial standards. The note on liquor ferri perchloridi fortis clears up a point which has given manufacturers a great deal of worry, the official sp. gr. not agreeing with the iron content of the liquor. The paper on melting-points rather points to a degree of refinement in respect to methods which it is difficult to conceive can be adopted by retailers generally, but the constants determined are most valuable. In con-

nection with the Pharmacopœia there was communicated a note by Mr. D. B. Dott protesting against the B.P. being taken as a standard in regard to the sale of medicines without some properly constituted body assisting local authorities in regard to the principles which should be recognised in instituting proceedings under the Sale of Food and Drugs Act. The phenol suppositories paper was useful. In it Mr. Dudderidge showed that by omitting wax a harder mass is obtained if the heat is kept low as the B.P. directs. The paper by Messrs. Allen and Brewis, read on Tuesday afternoon, was one of those rare papers which are seldom written. It combined commercial experience with chemical skill, and was rather witty. The authors got samples of different kinds of almonds and almond substitutes, pressed the oil from them, and determined the chemical and physical properties of the oils. This latter fact seemed to be overlooked by one or two analytical speakers, who expressed the idea that the figures indicated cotton-seed oil or something. These and other papers show that the spirit of research is not by any means dead in this country, also that it has a practical turn about it which is characteristic of the unemotional Briton.

### The Lost Opportunity.

THE unexpected has again happened. The Pharmacy and Medical Clauses of the Government Companies Bill have been deleted. A narration of the incidents which led up to this consummation will not be out of place, especially as they are unique. On Thursday afternoon of last week the Bill passed through the Standing Committee on Trade, and was reported to the House the same evening. This expedition was quite unexpected, even by parliamentarians, and least of all by pharmaceutical representatives. The Bill was down for consideration on Monday evening of this week, but it was not reached. The possibility of the Bill passing had enormously increased, for a single week may suffice for its passage through the Upper House. Partly owing to the delay of the Pharmaceutical Councils in declaring their position with reference to Clause 2, no arrangements either for amending or ending that clause had been made until a few days ago, when the President and Vice-President of the Irish Society came to London, and exhausted all their parliamentary resources to get Clause 2 amended. A day or two later the representatives of the British Society also began to show signs of life, and on Monday evening Mr. Glyn-Jones led a group of about a score of metropolitan and provincial chemists, who were attending the Conference *conversazione*, to the Lobby of the House of Commons, and there interviewed several Members of Parliament. Besides these efforts we hear by letter from a number of subscribers in the provinces to the effect that the interests of pharmacy are well appreciated by members. So far well. The Orders of the House of Commons for Tuesday showed that the Bill had first place. Fortunately or unfortunately, as the future will show, chemists from all parts of the country were in London, and Bloomsbury, on this occasion led by Mr. Glyn-Jones, was alive to its opportunity. At the luncheon in King's Hall, the President of the Society asked the members as they went out to fill in telegraphic forms which Mr. Chater, the principal clerk of the Society, would give them. The telegraphic forms were there, neatly typewritten, with the blank for the M.P.'s name and the sender's only to be filled. The rest of the space was occupied by this message:—

Your active personal opposition to Clause 2 of Companies Bill is earnestly requested.

A deputation of chemists was again led to St. Stephen's by Mr. Glyn-Jones, and they found the pink telegram-forms

fluttering in the Lobby like birds in spring. Ere long Sir Albert Rollit came out to tell one of his constituents that the pharmaceutical desire had been satisfied—Clause 2 was rejected, and with it Clause 3, without a division. The one grain of comfort in this lost opportunity is the rejection of Clause 3. With the help of the medical profession we might have got better terms; but all they cared about was their own interests. They had not a word of sympathy for that part of the practice of medicine which deals with the preparation of the physic. The party in the Botanic Gardens had not long assembled when the "good news" came by hansom, and everybody was jubilant. This is a plain record of the facts. We have little time for sentiment at the moment, when the printing-press awaits its burden; but we must say that more effort has been put into the matter by our pharmaceutical representatives this week than has been done since the Lord Chancellor published his clauses. If the same effort had been used for the modification of Clause 2 before the Bill reached the Committee stage, the sacrifice, inevitable we fear, which has been made would have been averted. A new Pharmacy Bill is what is now looked for. We have still to gather faith on that matter, and there is the little but very wise man who sits on the woolsack still to be reckoned with. He knows that the House of Commons has shirked a duty which its own Committee has declared to be pressing—viz., the need for regulating a practice which virtually infringes a law of the realm. And he may press the inconsistency home. Mr. Glyn-Jones had better keep the enthusiasm aglow until that uncertainty is disposed of.

### Resins.

"CHEMICAL research on the resins is of great antiquity. So opens the principal chapter of Tschirsch's work on the subject, which is briefly reviewed in another column. Any one who has read the now historic work of Agricola Libavius, or Crobius will agree with this statement; but far too little prominence has been accorded to work covering so wide a field and so long a period of years. Even so recently published a book as Richter's "Organic Chemistry" about half a page suffices to dismiss the systematic treatment of the resins. For years it has been customary to class them as "bodies of indefinite nature" the word in italics being used in place of indefinable. The gradual accumulation of facts concerning resins which has taken place during the last few decades has now found expression in the two excellent volumes by Tschirsch and Dieterich which we refer to elsewhere. It is not so long ago that the analysis of fatty oils and of essential oils with resins placed in the same category of empiricism. To-day we have numerous text-books and elaborate reliable methods of analysis for oils, and now we have Dieterich and Tschirsch have given a fair start to the resins. The systematic researches on this group has shown us that accurate discrimination of classes at least can be made by one or more of the following processes, which are regularly employed by the specialist in resin-analysis:—

The action of caustic potash tells us (1) the acid number, which is expressed as the number of milligrammes of alkali necessary to neutralise the free acids of 1 gramme of resin; (2) the volatile acid number expressed by the amount of potash necessary to neutralise 500 grammes of resin distilled from 0.5 gramme of resin; and (3) the saponification number as determined by saponification.

The action of acetic anhydride provides us with a quantitative expression when used to esterify the alcohols present, and gives us much reliable information.



The well-known property of phenyl-hydrazine of combining with bodies containing an aldehyde or ketone group furnishes a method of determining with approximate accuracy the percentage of carbonyl oxygen present, and the amount of methyl radicle, which is easily determined, gives less valuable information.

From these general methods—without mentioning special methods—it is obvious that we have a fair amount of assistance in judging these products. Largely owing to the exertions of Dr. Karl Dieterich, a fairly comprehensive number of figures have been obtained from numerous authentic samples, so that in many cases definite standards may be fixed with certainty. But it is not only in the main of the analysis of these products that we have been readily advancing. Many—indeed, the majority—of the substances which have been separated from resins can have a possible claim to be regarded as pure compounds. Many, although probably of definite individuality—suffer from that serious trouble of having enormously high molecular formulæ, as deduced from their ultimate analysis. It cannot be said that we understand much of the chemistry of these bodies; however, the number of typical well-defined aromatic compounds isolated from the resins is gradually growing, and we may expect to see the chemistry of this group develop in the same satisfactory manner as with the case with the fatty, and still more recently the essential oils. Towards this end so satisfactory a treatise as that of Tschirsch's, which shows a master-mind grasp of the subject and a genius for organisation, will greatly contribute.

## Explosives.

THERE is plenty of interesting reading in the Twenty-fourth Annual Report of her Majesty's Inspectors of Explosives which has just been issued. Colonel Ford, C.B., who succeeded Sir Vivian Majendie as Chief Inspector, has in his turn been succeeded by Captain J. H. Thompson. Colonel Ford had to retire owing to the age limit. We are not surprised to hear that the growth of trade in explosives has continued during 1899, the net increase in factories during the year being eight. Several explosives have been added to the authorised list. These have to be first tested by Dr. Dupré, and can then be manufactured if found tolerably safe. Several cases are given of illegal manufacture of explosives, and the question has been raised whether the exemption under section 4 of the Act which permits of explosives being made for experimental purposes applies to the manufacture of a limited quantity in a factory. The section reads:—"Provided that nothing in this section shall apply to the making of a small quantity of gun-powder for chemical experiment and not for practical use or for sale." As inspectors read it, no quantity can be considered small which is in excess of what could reasonably be made by chemical experiment. There has been no ruling in a court of law on this point; but it seems that to make it an experiment it should be able to be carried out with such apparatus as are usually found in a chemical laboratory, and the experiment would include the action on the explosive of chemicals and solvents, experiments on ignition, and as to sensitiveness under friction or percussion. In a journal for boys the editor began to give a series of articles with instructions for the manufacture of fireworks. The editor was written to, and at once consented to withdraw the articles when he saw the risk he would be leading his readers into. In the section of the report devoted to poisoning and conveying there is a funny little incident recited. A case was landed at the Victoria Docks, London, from Adelaide, addressed to Sir William Armstrong. It was entered as

containing "Primers, bound books." On examination, however, the case was found not to contain bound books, but Primer's vent sealing-tubes for guns, and it was accordingly detained. In Dr. Dupré's report particulars are given of the new explosives which he has examined during the year. Reference is made to the chlorate-of-potassium fire at St. Helens in May, 1899, experiments proving that the chlorate is even by itself liable to explode with very considerable violence under certain conditions, happily but rarely found united. Reference is also made to the death of the two women-dispensers at Rochdale Workhouse infirmary by an explosion of ether—or, rather, by the ignition of ether, as there seems to be a doubt whether there was actually an explosion. There were six explosions of acetylene-gas during 1899, and two people were killed by them. Air mixed with the acetylene seems to have been the cause of these accidents.

## THE B.P. REPORT.

Dr. Attfield's report on the Pharmacopœia has been distributed somewhat freely to those who are directly interested. It will be observed that Dr. Leonard Dobbin deals in this issue with the matter, and we think it right to say that similar opinions to those expressed by him are held by others. We specially avoided direct criticism of the "Digest" last week—that is of some of the replies to criticisms with which we are directly concerned. That we find is a very common feeling, and it is chiefly personal esteem for a "dearly-loved professor" which dictates a pardonable silence.

## THE OPEN-AIR TREATMENT.

It has no doubt occurred to many chemists, as it has to us, that the provision of some simple directions for the open-air treatment of consumption would be of great service to the public. We are therefore pleased to observe that Messrs. Allen & Hanburys, in a copy of a little pamphlet which they have compiled, give in plain language a useful description of the arrangements which may be made at home for this modern and most effectual method of the treatment of phthisis. The pamphlet speaks about the house in general its ventilation, heating and lighting, and also refers in specific terms to the nature of the treatment, and discusses such provisions as baths, clothing, recreation, and feeding. Suggestions are given for dietary, which show what the patient should receive on seven occasions during the day from 6.30 A.M. to 9 P.M. This part of the pamphlet is followed by a series of recipes for the employment of eggs and milk in the dietary, which in themselves are sufficient to increase the weight of consumptive patients. The pamphlet is priced to sell at 1d., and Messrs. Allen & Hanburys are to supply them to chemists at the rate of 2s. 6d. for fifty and 3s. 6d. for one hundred copies, which is below the cost-price. We feel quite sure that any chemist who cares to take the trouble to place a few of these pamphlets on his counter will soon find them asked for by his customers, who are likely to be better customers on account of the advice which the pamphlet contains.

## WHAT'S IN A NAME?

It seems hard that a man cannot use his own name. It is his birthright, and whatever honour is attached to it he is entitled to share. But when for "honour" we substitute "property," quite a different complexion is imparted to the matter. This has been splendidly shown by the Master of the Rolls this week in his judgment in the Valentine case. The facts of the case need not be repeated, and all our readers know that for more than a generation a valuable meat-preparation has been identified with the name of Valentine, and the public were so accustomed to the article that they were not very particular about what they called it

as long as they asked for Valentine's. When, therefore, another Valentine came into the field with a different kind of meat product, there was a danger of the first article being injured. As a matter of fact the Court has found that injury was done, and it upholds the sacred rights of property by declaring that the new product must be sold in a way which will not clash with the old. There is nothing hard in that. It is a mere incident that a name happens to be attached to the property at all, but since it is there and is a substantial part of the property it cannot be appropriated by anybody else. The case is exactly parallel to our own. We have a property called THE CHEMIST AND DRUGGIST. It is a trade journal, got up in a certain way, which has commended itself to the world at large. There is no legal restriction to anybody publishing a trade journal of the same pattern. This has been done, but no one else except ourselves may call their paper THE CHEMIST AND DRUGGIST. We have that right by copyright and in common law. It is the same with surnames which become associated with the products of particular individuals, and it is well to have the law of the matter so clearly stated as by the Master of the Rolls.

#### RATS.

Since the appearance of bubonic plague in the East and on the Continent municipal authorities have occupied themselves very much with the question of the destruction of rats and mice, as it has been shown by numerous observations that they play a leading rôle in the propagation of this disease. In France several physicians have come forward with ideas, chief among which is that of M. Danyoz, of the Pasteur Institute. He has, it appears, achieved his object by giving to the rodents bread or grain soaked in a broth culture of the bacillus "typhi murium." The experiments have been conducted in sewers, and according to observations, which are corroborated by M. Calmette, of Lille, and others, it has been proved that, not only do the rats eat very willingly of the dangerous products, but the disease thus communicated is propagated by contagion. The strangest part of the business, however, is that the microbe is quite harmless to other domestic or wild animals, as well as to man. Another method of destruction is that proposed by M. Nehring, of Altona, Italy, who placed small fish cut open and smeared with phosphorus in the sewers at points where they were left dry. The consequence was that the fish were swallowed with avidity, and the mortality among the rodents was said to be enormous. M. Apéry, of Constantinople, proposes carbonic-acid gas used systematically for the purpose of destroying the rodents on board ships, but his method is intricate and not without an element of danger.

#### BAVACHI.

At a recent drug-sale ten bags of seeds bearing the above name, and shipped from Bombay, were offered by one of the brokers without reserve. These seeds have been identified as those of *Psoralea corylifolia*, an erect, annual leguminous plant, 1 to 3 feet high, distributed from the Himalayan region through India proper to Ceylon. The branches and simple petioled leaves are conspicuously dotted with glands. The flowers are in long peduncled heads with a yellow corolla, while the oblong, flattened seeds, which have a rough coat and are dark-brown in colour or nearly black, are from 2 to 2½ lines in length, and possess an agreeable aromatic odour, which, according to Dymock, exactly resembles that of the bael-fruit (*Egle Marmelos*), and very similar to elemi. In native Indian works on materia medica these seeds are described as being hot and dry, and, according to some, cold and dry, and possess lenitive, fragrant, stimulant, and aphrodisiac properties. They are recommended in leprosy and other chronic skin-diseases, and some years ago they are stated to have been extensively tried in Bombay as a remedy in leprosy with

some success. Several other species of *Psoralea* have been used in America as gentle, stimulating, and tonic nervines. In Chile a representative of this genus, known as "Culen" (*P. glandulosa*), is considered a valuable food for cattle browsing; the roots are employed as a vomitive, the bark and stem against diarrhoea, and an infusion of the flowers and leaves is considered to be a good stomachic and vulnerary, and is also further used as a substitute for tea. It may be well to record the fact that bavachi-seed has been confounded with musk-seed (*Hibiscus Abelmoschus*), which it somewhat resembles in appearance, but is much flatter and of a darker colour.

### Schleich's Skin-remedies.

THE following are further prescriptions by Dr. C. L. Schleich, of Berlin, the well-known German dermatologist, and are used by him in his clinic:—

#### CERATE-PASTE.

Melt 1 kilo. of yellow beeswax in a large crucible on a water-bath. Remove the water-bath from the fire and drop in 100 grammes of strong solution of ammonia. Stir constantly until thickening takes place; but the stirring must be done lightly. Again place on the water-bath, and stir until a homogeneous, bright-yellow, soft, anhydrous, liquid mass is obtained, free from lumps. Neutralise the acidity of the emulsion by the addition of ammonia.

warmed and kneaded thoroughly (with perfectly clean hands) through each bandage so that each thread of the bandage is saturated. The bandages are then rolled and wrapped in antiseptic paper. Lastly, add 5 per cent. of ichthylol or formalin.

#### STEARIN-PASTE OR STERIL.

This is made in exactly the same way as the wax-paste, using stearic acid instead of wax.

#### SERUM-PASTE.

Ox-blood serum, fresh from the slaughter-house, is mixed with 500 parts of finely-powdered oxide of zinc. For smaller quantities sterilised blood serum from the bacteriological laboratories may be used and suitable quantities taken. Naturally the latter must be made liquid by heating before being mixed with the oxide of zinc. Then paint on glass plates, and when the powder is dry scrape off the scales. Make into a fine powder and sterilise for twelve hours at a temperature of about 75° C.

#### WAX GELATIN OR GLUTEN-CERATE.

This mixture is similar to cerate-paste, using instead of 10-per-cent. solution of gelatin and preparing in the following manner:—Dissolve 10 grammes of pure gelatin in 100 grammes of water, and shake the mixture vigorously with the yolk of an egg. Then heat the solution for two hours on a water-bath and filter. The clear solution will then be sterilised at diluted with sterilised water a thin liquid. The gelatin then made alkaline with saturated solution of carbonate of soda added to the melted ammoniated wax. The vessel is afterwards taken from the fire and stirred till cool. Eventually the mixture is again heated with the water and ammonia until the consistency of a syrupy lime is obtained.

#### PULVIS SEROSUS C. GLUTOL.

Mix equal parts of glutol and pulvis serosus. Then prepare the mixture as follows:—

|                                   |                                           |
|-----------------------------------|-------------------------------------------|
| Zinc seros. (finely powdered) ... | 150 grammes (sterilised at about 100° C.) |
| Spirit, to dissolve ...           | 10 cgrs.                                  |
| Oil of citronella ...             | 10 "                                      |
| Eosin ...                         | 10 "                                      |

Macerate continuously for thirty-six hours, then collect on a filter, and dry.

#### MERCURY PENCIL.

|                   |          |
|-------------------|----------|
| Metallic mercury  | 50 grms. |
| Peptone-paste ... | 100 "    |
| Cacao-butter ...  | 15 "     |
| Distilled water   | 20 "     |

Mix and divide in pencils of from 15 to 20 grammes each. To be rubbed on the part until complete blackening of the skin and dryness takes place.

#### ICHTHYOL MERCURY PEPTONE.

|                   |          |
|-------------------|----------|
| Metallic mercury  | 100 grms |
| Peptone-paste ... | 100 "    |

Rub together, and add—

|                    |           |
|--------------------|-----------|
| Peptonated paste   | 200 grms. |
| Cocoa-butter ...   | 30 "      |
| Distilled water... | 30 "      |
| Ichthylol...       | 15 "      |

#### OINTMENT-BANDAGES.

For each bandage measuring 8 c.m. broad and 5½ m. long use 250 grammes of skin-cream or pure unmixed vaseline-wax. This is

It is stated that an extract-of-beef factory will shortly be established at Juiz de Fora, Brazil.



## The Dispensing-counter.

### Homœopathic Prescriptions

By JOHN T. HALL.

WHATEVER views may be held as to the value of homœopathic treatment, or the truth of the formula *similia similibus curantur*, no one can dispute that homœopathic pharmacy is elegant. Indeed, the globules and pilules of Hahnemann in their dainty little tubes, carefully excluded from the deleterious light-rays by neat outer cartons, were the forerunners of the tabloids and parvules, the granules and pellets, &c., with which we are so familiar to-day. And, if for this reason alone, the memory of the old German physician should be held in respect by modern pharmacists as the founder of elegant pharmacy, even if they deny his claims to be the first exponent of scientific therapeutics.

Until a few years ago homœopathic prescriptions were dispensed almost exclusively by homœopathic chemists, and if a stray one found its way to an ordinary chemist's, it was usually sent on to the nearest homœopathic chemist to be dispensed; the ordinary man either not caring to attempt to decipher the eccentric recipe or regarding it with contempt. Nowadays, doubtless due to increased competition, this procedure is seldom followed, many chemists not only dispensing homœopathic prescriptions—sometimes more and sometimes less correctly—but also advertising a special "homœopathic department."

Homœopathic prescriptions present few difficulties to a trained pharmacist, but they call for a scrupulous delicacy and exactitude in dispensing which are absolutely essential, and without which the dispenser is not rendering justice either to the patient or to his physician. The prescriptions may be for tinctures, powders or triturations, pilules, globules, compressed tablets, and tablet-triturations.

*Tinctures*.—Prescriptions for tinctures usually consist of a single tincture, thus:—

Tr. aconiti 3x ... .. 3ij.

Sig.: Gtt. ij. n. et m.

or of two tinctures to be taken in alternation, thus:—

Tr. bryoniæ 3x ... .. 3ij.

Tr. phosphori 3x ... .. 3ij.

Sig.: Gtt. iij. 2dis hor. alt. sumend.

If no quantity of water is specified, the drops should be directed to be taken in half a wineglassful. The bottles used should be of green or amber glass, and provided with a good lip or spout for dropping. Good corks are essential to dispensing of every kind, but for homœopathic work they are a *vinc quâ non*.

The tinctures may be prescribed with the addition of water as mixtures, thus:—

Tr. nucis vomicæ ... .. 12/6

Aquæ destill. ... .. 3vj.

M. Ft. mistura cujus capiat cochlearia duo magna tertiis horis.

In this instance 12 drops of the sixth dilution are prescribed, and water to 6 oz.

*Powders* are much in favour with homœopathic doctors, and generally consist of so many grains of an ordinary sugar-milk trituration, thus:—

Trit. mercurii sol. 3x ... .. gr. iij.

Mitte tales chart. xij. Direct a powder to be taken dry on the tongue every four hours.

or they may consist of a tincture dropped on to sugar of milk, dried, and weighed out, thus:—

Tr. pulsat. 6 ... .. m. vj.

Sacch. lactis ... .. q.s.

Ft. pulv.

Direct this powder to be dissolved in six tablespoonfuls of water, and a tablespoonful to be taken every morning and evening.

In this case the 6 minims of the tincture is to be dropped in 18 gr. of sacch. lactis, carefully incorporated with a one spatula, allowed to dry, and then divided into 3-gr. powders.

All homœopathic powders are wrapped in tinfoil, in addition to the ordinary powder-paper.

Sometimes the powders are ordered to be prepared from globules or pilules. In this case the globules or pilules are simply crushed and triturated with the sacch. lactis:—

Glob. ignatiæ 6 ... .. iij.

Sacch. lactis ... .. q.s.

Ft. pulv. Mitte tales xij.

Direct a powder to be taken every four hours.

Frequently the triturations are ordered in bulk, and if no quantity is specified a 3ij.-bottle should be dispensed:—

Hepar sulphuris 3x ... .. 3ij.

Sig.: Gr. v. nocte maneque sumend.

As a rule homœopathic physicians prescribe bulk powders in doses of 3 or 5 gr., and homœopathic chemists keep trituration-scoops of these sizes in stock. In the absence of a scoop, however, it is usual to direct as much as covers a threepenny-piece as the equivalent of 3 gr., and a sixpenny-piece for 5 gr. This method of measuring is signified by a 3 or a 6 enclosed in a triangle, thus:—

$\triangle 3$  = as much as covers a threepenny-piece  
 $\triangle 6$  = " " sixpenny "

Separate mortars should be kept for homœopathic work, and all operations should be conducted remote from strong-smelling substances.

*Pilules and Globules* present but little difficulty. The method of medication will be found in the Pharmacopœia. Globules are used much less in these days than formerly, although it was with globules that Hahnemann founded the system.

*Compressed Tablets* are not so popular with homœopaths as the trituration-tablets because of the manipulation required, which is calculated (in homœopathic opinion) to interfere with the purity of the medicine. Any trituration can be made into tablets, and any of the small machines advertised are suitable for the purpose.

Merc. biniodid. x. ... .. gr. v.

Ft. tab.

Mitte tales xxxvj.

The trituration is slightly damped with weak gum-water and passed through a moderately fine sieve, thus obtaining it in the form of minute granules. These are carefully dried, and then lightly sprayed with liquid paraffin—this to prevent the powder from sticking to the moulds—and then compressed in the usual manner.

*Trituration-tablets*.—The moulds for this purpose are made for fifty and a hundred tablets respectively, and for homœopathic work should preferably be of ivory or, failing that, of celluloid. Metallic moulds are unsuitable. The trituration is previously rubbed up with a little dry pulv. gum. acaciæ, then damped with spirit, water added to the consistency of stiff putty, the mass pressed with a bone spatula into the moulds, and the tablets set to dry.

### APPLICATIONS.

Tr. arnicæ 6 ... .. 3ss.

Aquæ destill. ad ... .. 3vij.

Ft. lotio.

Sig.: For external application.

Direct a piece of lint in three folds to be soaked in the lotion, applied to the bruise, and covered with oiled silk.

Lin. rhus ... .. 3ij.

Lin. saponis simplicis ... .. 3iv.

Ft. linimentum.

Sig.: For external application.

Direct to be gently rubbed into the joint every four hours.

All homœopathic medicines should be dispensed in green or amber bottles, and these enclosed in card cases. The homœopathic department should be kept quite free of strong-smelling substances, and all utensils used should be kept specially apart from the ordinary dispensing. Homœopaths have sharp noses, and object strongly to smells, and a faint suggestion of lavender or turpentine on cork or bottle may lose you a good customer.

## North African Experiences.

By G. CLARIDGE DRUCE, M.A., F.L.S., Pharmaceutical Chemist.

### II.

THE last article (*C. & D.*, May 19, page 831) left me prowling round the Roman amphitheatre at Guelma. From there we took a drive to Hammam Mesquotine, and had some interesting botanising on the way. The curious *Ophrys lutea* and *O. fusca* were rather frequent, the beautiful *Tetragonolobus purpureus*, with its magnificently-coloured flowers, was seen, and *Rhamnus Alaternus*, *Calycotome spinosa* (a prickly genista-like plant), and very commonly by the roads and fields the wild cardoon (*Cynara Cardunculus*) grew, and our drivers gathered the long leaf-stalks of the latter, and, peeling them, devoured the decorticated petiole with great relish. In drier places grew *Lavandula Stœchas*,

A beautiful small-flowered blue iris appeared shortly before reaching our destination.

### THE HOTEL OR THERMAL ESTABLISHMENT AT HAMMAM MESQUOTINE

is a curious structure, being in the form of a quadrangle, but the buildings are not connected at the angles, and are only one story high, the range of bedrooms being nearest to the river; the interior of the quadrangle is a rough garden, in which are many orange, citron, and lemon trees, with the fruit ripe, so that a lemon-squash of the most delicate flavour could easily be obtained; and there were also besides olives, great geraniums, and large rose-bushes in full flower, not to speak of Roman antiquities, of which there are many. To find one's way, especially after dinner, through this dimly-lighted garden to one's bedroom required some dexterity; in fact, the easier, if not the safer, way appeared to be to engage the services of M. Pauline to lead one across. Five minutes' walk from one's bedroom took one to a scene which it is difficult to do justice to, for on an



CONSTANTINE.

the flowers of which, under the name of "flores stœchados" or "stœchas arabica," were formerly included in the London Pharmacopœia, and Pereira says (probably on doubtful authority) that they yielded the true oil of spike. In the woods of terebinth, *Quercus Ilex*, and *Quercus coccinea*, Jules Gerard killed a lion about forty years ago; with the forest-clearing, the opening up of roads, and the spread of cultivation, the large carnivora have died out, but the jackal, hyena, civet, and other animals are still existing, while the quantity of goldfinches and other birds is a pleasing feature. The view of the viaduct across the river is very fine, as many palms and oleanders adorn the bed of the stream. On the way we also noticed the umbelliferous plant, *Thapsia garganica*, but it was not in flower—it is the "Bou Nafa" of the Arabs, and from the base of the stem a gum resin is obtained by incision, which enters into emplastrum thapsicæ. The resin is a powerful irritant, and cases are on record where dangerous symptoms have resulted from its use.

irregular plateau, which is situated some 100 or 200 feet above the river-bed, are scattered pools of steaming water. Nearer examination reveals that in these shallow pools, which are contained in a calcareous bed—a calcareous bed which is deposited from the water itself, and which varies in colour from the purest white through pinkish to dark brown—the water is boiling furiously. The elevation of the country above sea-level keeps the temperature of the water at about 204° F.—nevertheless, this temperature is only exceeded by two or three other thermal springs in the world. In some larger and deeper pools near to the edge of the cliff, which slopes precipitately to the river, are some which have a faint hedgesparrow-egg-like tint. Finding a circuitous route down by the storage-cisterns to the river-bed, and looking up the steaming cliff, a sight presents itself which is not to be equalled in the old world, for during the ages with which this cliff has been covered by the streaming hot water it has become coated with a calcareous deposit in such a wonderful manner as to be quite unique. In some places it looks as if



the falling water had been suddenly turned into the whitest and most fleecy-like wool, in other places where traces of iron have also been deposited it has oxidised to rich red-brown tints, and where sulphur and iron have been in evidence almost black shades have been produced. Subsequently, I climbed the face of this wonderful cliff in order to peer into the beautiful basins of steaming water, and at the base found a small grotto where the maidenhair fern was very luxuriant. In the warm water of the river Arabs were busy washing clothes or cooking their food, and the dirt resulting from the former operation has materially affected the purity of the stream. *Arundo Donax* in straggling



THE HOT CASCADE OF HAMMAM MESQUOTINE.

atches bordered this river; close to the steaming cliff two alms were growing and added further charm to the scene. On the plateau there were evident remains of old springs, pillars of concretionary rock marking out the orifice from which water originally issued; some of these pillars are as much as thirty feet high, and legendary tales requiring oriental imagination to invent, and more than Oriental credulity to believe, are connected with them. In the course of ages Nature has done something to cover them with vegetation, and plants of hawthorn or rhamnus, maidenhair, and ceterach now grow in crevices which once steamed with the hot waters of a bygone time.

As the waters give off sulphuretted hydrogen one gets a whiff of the sulphur-laden breeze which reminds one of rathepper or Harrogate. As is the case with so many of her "baths," these were well known to and used by the Romans, by whom they were called *aquæ tibillitinæ*, and one of the Roman baths cut out of the rock are still used. Close to the edge of the pools of hot water might be seen growing our own bog rush (*Scheenus nigricans*), and with it in form of *Scirpus Holoscheenus* (only known in Britain on the west coast of Somerset and Devon), while on the grassy slopes near *Ranunculus flabellatus*, which is found in Dorset and mimics our own buttercup, is frequent. Here, too, occurred *Bartsia latifolia* (*Euphrasia latifolia*), with reddish flowers, not the *E. latifolia* of Pursh, which is a plant of North America and North Europe. *Viola Riviniana* also occurred, and *Smilax mauritanica* and *S. aspera* and *Paragrus aculeatus* were also obtained. Round some Arab dwellings with zereba hedges of *Paliurus* and *Zizyphus* we met the beautiful blue-flowered *Anagallis*, which is common in cultivated ground, and the pretty *Cerinth gymnanandra* with its striking contrast of colour in the inflorescence, and the rich purple-flowered *Echinum creticum*, which is very abundant at Carthage, Bougie, and elsewhere. *Paronychia cretica* also occurred. As I have said, the

#### MEDICINAL VALUE OF THE WATERS

As well known during the Roman occupation, and many remains of columns, mosaics, and baths show that the establishment must have been on a large scale. During the long years under Arab rule they became almost forgotten by the

outside world, but the natives themselves have always considered the waters to be a valuable remedy for certain diseases. The water during the ebullition gives off sulphuretted hydrogen, and after reboiling becomes potable—at least so we were informed. It deposits a large quantity of carbonate of lime. The solids of a litre of water is as follows (in grammes):—

|                           |         |                           |         |
|---------------------------|---------|---------------------------|---------|
| Chloride of sodium ...    | 0.41560 | Carbonate of magnesia ... | 0.04235 |
| Chloride of magnesium ... | 0.07864 | Carbonate of strontia ... | 0.00150 |
| Chloride of potassium ... | 0.01839 | Metallic arsenic ...      | 0.00050 |
| Chloride of calcium ...   | 0.01085 | Silica ...                | 0.07000 |
| Sulphate of lime ...      | 0.38086 | Organic matter ...        | 0.06000 |
| Sulphate of soda ...      | 0.17653 | Fluorine and oxide of     |         |
| Sulphate of magnesia ...  | 0.00673 | iron ...                  | traces  |
| Carbonate of lime ...     | 0.25732 | Total solid matter ...    | 1.51917 |

Although the iron exists only in traces it colours the deposit, as I have said, in a marked manner.

The gas which is given off by the water in a hundred parts has the following composition:—Carbonic acid 97, sulphuretted hydrogen, 0.5, and nitrogen 2.5, but it is not at all unlikely that in the nitrogen a considerable percentage of helium may be found.

The ferruginous spring has 0.0500 of oxide of iron in a litre. Much success has been obtained from it in treating anemia, cachexia, and weakness of the digestive functions; the normal springs are largely used for rheumatism and skin-affections. The quantity of water given off by the springs has been estimated to be as much as 200,000 litres an hour, which is about thirty times as great as at Bareges, and forty times as much as the Bourbonne springs.

The neighbourhood of Hammam Mesquotine is very interesting. Within two kilometres is a subterranean lake whose existence was only discovered as recently as 1878, when a portion of soil, nearly forty yards in diameter, fell in and disclosed to the affrighted observers a subterranean lake nearly fifty yards long by over thirty wide. The great sight of the neighbourhood are the grottoes or caves of Du Taya, with which can be combined a visit to the dolmens and megalithic remains of Roknia. The caverns are of immense extent, but unfortunately we had not time to explore them, nor were we able to spare time to climb the Djebel Taya, which is nearly 4,000 feet high, and from whence a splendid view can be obtained extending as far as to Philippeville, and it would have been especially interesting as it contains the mines of cinnabar which were worked by the Romans.

#### FROM HAMMAM MESQUOTINE TO KHROUB

is a railway-journey of about 100 kilometres, and a railway-journey to me is always enjoyable, excepting, of course, that comprised in the area of our dirty metropolis. In a country such as this there is always something of interest, some new feature in the landscape, some small railway-station where the Arabs lounge about in the sunshine as if there were no such things as trains in existence; one always knew when one was approaching a station by the plantation of eucalyptus bordering both sides of the railway. The eucalyptus is not a favourite of mine—there is such a sameness about it, and the untidy-looking bark gives an air of a washing-day in a suburban back-garden—but it is said to have been of great service in draining so much of the malarious country that we may grant to its hygienic properties what we might be inclined to refuse to its claims as a factor in the scenic effects of the country. Then the time is beguiled by the occasional stop of "cinq minutes" or "dix minutes," which just enable one to rush out and secure some plant or another by the railway—a proceeding which rouses the ire of the dog of the station, who, I fancy, is the acting ticket-collector, but he is not proof against a well-directed pebble, which enables one to grab *Trifolium tomentosum* or *T. Michelianum*, or *Eruca*, or *Alyssum*. One also enjoys the sight of quaint Arab villages situated on the hillside, or some droves of mules or horses with their attendants, or flocks of goats, and the herd-boy and the patient ass, whose lot has been toil and cruelty from remote ages—but this is not a pleasing sight, and one turns with relief to see the apricot-tree with its countless blossoms, or the almond-tree, now in leaf, or the sweet-scented cherry, and the thick clusters of white blossoms on the plum, or the long rows of vines, as yet showing no sign of leaf. Sometimes, alas! one sees groups of handcuffed Arabs waiting to be conveyed from one prison to



another, but, as a rule, the faces have neither the depraved nor the hopeless look impressed upon so many of our felons. From Khroub we turn

#### NORTH TO CONSTANTINE,

passing country in which there are many Roman remains, and which is bordered by finely outlined hills where grows the Halfa, or esparto grass, now such a large article of exportation, and amid which the deadly-hooded viper is to be found, or by cornfields, green with the richest tint from the myriads of peaceful spears of young barley.

Constantine occupies a commanding position on an isolated plateau of rock about 2,000 feet above the sea-level, separated on the south and east from the adjoining hills by a ravine nearly 1,000 feet deep in which runs the River Roumel; the sides of the ravine are so steep and the depth is so great that the city is absolutely impregnable on this side, while to the west, although there is no river gorge, yet the steep ascent renders it scarcely less accessible to attack. A path has been constructed in the ravine, sometimes formed of planks supported on girders driven into the cliffs, at other times crossing by crazy bridges the deep gulf, and by following this path one of the most impressive bits of scenery of its kind in the world can be enjoyed. In one place a natural bridge of rock crosses the ravine (there are three others); near to this from the cliff above fall in cascades, which are almost converted to spray before they reach the bed of the stream, two or three waterfalls, one at least of which appears to be the surface-water drain of the city. The water of the Roumel itself falls in a series of cascades. In another place a spring of cold water is so highly charged with lime as to deposit it in the most curious forms on the face of the cliff. On approaching the south one sees the big cliff on which is built the Kasbah, which, from the time of the Romans, has been the stronghold of the place, and from the steep rock called Sidi Rached the unfaithful wives and criminals were thrown into the gorge below. On the east side a pretty introduced *Pelargonium* grows wild, with *Mesembryanthemum* and other plants, and from the rocks near the Kasbah the eagles come out in

rocks are tanneries whence issue parti-coloured streams. On the south-west side extensive works are going on in order to remove a cliff of considerable extent, which will allow of the extension of the city in that direction. On waste ground near



ROCKS NEAR THE KASBAH, CONSTANTINE.



THE GORGE OF CONSTANTINE.

glorious and superb flight, falcons and hawks are also describing their airy circles in the blue ether, and on old walls and housetops may be seen storks billing and cooing in great contentment, and perched on the most perilous-looking

are rows of dwellings which can scarcely be equalled for squalor. I was glad to get away from the "Stannaries," as I named these tin dwellings, into purer air. Here in Constantine, as in Tunis, certain streets appeared to be reserved for special trades. These streets are very narrow, often very steep, and almost meet overhead, and everywhere are crowded with people. I had a cup of coffee in an Arab café, which was full of Arabs seated on the matting-covered ground; some were playing at cards, whilst others appeared to be sleeping, but all the while one of their number chanted in a monotonous tone chapters from the Koran. The coffee is made fresh for each person in a tiny tin pot, and, after boiling, the coffee is poured off with not more than a quarter of it "grounds." The Arabs were certainly well behaved, and one could not help contrasting this scene with the interior of a beerhouse in the East-end, where the advent of a couple of foreigners would scarcely have been treated so quietly, and where one of the *habitues* would certainly not be found reading a chapter of the Bible to the rest. We also visited a Café Maure, where two girls with rather pretty faces but wretched figures "danced dances that ought never to have been danced," devoid of any charm, and unnatural and unseemly. We visited the Jamaa Sidi el-Kettani, the Mosque of Salah Bey, which is one of the finest in Constantine, and were shod in slippers in which we had to shuffle over the rich carpets as best we could, for if one came off the wearer had to stand like a flamingo with his leg in the air while the slipper was replaced. The mimbar or pulpit is beautifully ornamented with agates and coloured marble. In the grocer's shop at Constantine I was enabled to procure Liebig's extract of meat, 2-oz. pots for 2-50, and also Maggi, and some soup made of the two with the hotel bouillon did much for my friend the Alderman, who had been so poorly here that I telegraphed to Algiers for assistance to remove him, which, however, I was unable to obtain. Thanks to the soup and some medicine got from the pharmacy, whose sign is a fearsome serpent, he was enabled, however, to continue his journey with a Toothbrushes, such as would be sold at 4d. in England were 1-60 in Constantine, but nail-brushes were not so high priced.



## War Notes.

**TRANSVAAL AND O.R.C. SUBSCRIBERS.**—Any subscribers of *THE CHEMIST AND DRUGGIST* whose places of business were in the Transvaal and Orange River Colony, and who have not received their copies since the war broke out, are requested to send their names and addresses to the Publisher, 42 Cannon Street, London, E.C. We have reserved their copies of *THE CHEMIST AND DRUGGIST* and copies of the *DIARY*, and these we shall send to them as soon as they inform us of their addresses.

**CIVIL COMPOUNDERS AT THE FRONT.**—Our constant correspondent with the R.A.M.C., attached to one of the Cavalry brigades with Lord Roberts, sends us another interesting communication, this time from the late capital of the Transvaal:—

Stadt Artillery Barracks, Pretoria,

June 17, 1900.

My last note was from Kroonstadt on the 20th ult. Kroonstadt is a very humble-looking town, with one-storeyed buildings with verandahs. In the centre of the town is a neat church at present

At night the veldt fire, winding its way along ridges of the kopjes, was rather a pretty sight, in appearance like a huge firework-display. Pieces of ice were found in our water-bottles the next morning. We moved off at 5.30; after covering three miles we reached Klip River. Our next camp was reached at 8.30 p.m., after marching twenty miles. Coffee was served out before turning in for the night. Germiston could be seen stretched out in front of us at daylight the next morning with its gold-mines. The hospital was divided into two sections—one half moving on with the brigade, the other half remaining with the sick. At night we camped by the roadside. Germiston is rather a scattered town, with two or three hotels. On the doors of some of the shops were signs such as "Come in; closed on account of the dust." In the morning we moved on again over very hilly ground, passing several mines on the way. After ascending a very steep hill overlooking Johannesburg, we pitched camp. The town was given to 10 a.m. to surrender. Crowds of people arrived at our camp with small luxuries for the troops. Bread was in great demand. The view from the top of the hill is magnificent; the town lay scattered in front of us, surrounded by beautiful wooded kopjes. In the afternoon we marched into the town, the King's Own Scottish Borderers heading the procession with their pipers. Several of the streets were like Parisian boulevards, with fine hotels, on each storey of which is a verandah. The reception from the inhabitants was magnificent. Loaves of bread were handed to the troops; cups of tea or coffee were handed over the railings of the villas. In Commissioner Street were several magnificent warehouses, all tastefully illuminated by electric light. Our camp was pitched about a mile from the fort. We moved off at 8 a.m., marching six miles through a pretty wooded country, encamping on the face of a kopje at Jokskei River. The following day we rested. On the Sunday we moved off at 6.30 amidst huge veldt fires. After covering twelve miles a halt was made. Behind us was the Guards Brigade; it was a fine sight watching them cross a drift in quarter-column. The next day the march was continued. The veldt had all been burnt quite black. Right ahead lay a range of kopjes, behind which lay Pretoria. A terrific artillery duel was going on, the siege guns being brought up by the Suffolk Regiment. The balloon was at once filled from a number of compressed-hydrogen tanks fitted up on a waggon, the gas entering the balloon through silk tubes. In the car of the balloon were fitted a strong pair of field-glasses, also a drawing-board with tracing-paper attached; an ascent was at once made. In the evening the hospital was pitched, and a couple of wounded men arrived; both were bullet-wounds in the thigh, and were attended to by Dr. Watson Cheyne, of Edinburgh, in his own tent, which is lit up by acetylene-gas. The next morning all was still. The surrender had taken place, the hospital was struck, and we moved off towards the town. The hospital soon filled—250 patients in three days. In one week we had six deaths, chiefly from dysentery and enteric fever.



R.A.M.C. DISPENSERS AND BOER PRISONERS.

used as a hospital, all the pews being heaped together outside the building. On Tuesday, May 22, we rose at 5 p.m., and were on the move at 5.45, marching across fairly rough ground, which very soon told on the troops. After covering twenty-one miles we arrived at Steen's Camp Dam. The next morning we rose at 5, marching twelve miles to Roodevaal. When on the march a herd of springbok passed us, travelling at a great pace. By this date our hospital staff had been reduced from thirty-six to one non-commissioned officer and twelve men. On the Friday we moved sixteen miles on to Leuw-Wendral, where jam was served out to the troops. Our next march the following day was largely through ploughed fields all lying waste. At night we reached Tai Bosch, encamping beside a colliery, after travelling twenty-two miles. The following day, Sunday (27th), we marched on through ploughed fields. On approaching the Vaal River the balloon ascended. Guns could be heard firing on our right. Suddenly we arrived at the Vaal River, an uninteresting, tame-looking place, and quite unlike the beautiful wooded banks of the Orange or Modder. Our division crossed three miles west of Viljeon's Drift at 2.30 p.m. Several soldiers had to cross with their trousers on, the water taking them up to the waist. On the northern bank are a number of huge collieries; smoke was issuing from the chimneys as we passed. Our camp was pitched at Vereenigen, a mile distant from the river, beside a number of Kaffir kraals; the male occupants were all intoxicated on our arrival. The next morning we marched, amidst great difficulties owing to huge veldt fires, twenty miles, encamping beside a row of trenches recently evacuated by the Boers.

The other compounders and I get all the dressing of the hospital to do; some days we have a couple of hundred cases to dress, chiefly poisoned sores from the thorns of the mimosa-trees. These have given a great deal of trouble during the campaign, and in one or two cases a finger had to be amputated. I got a pass to visit the town from 2 to 7 p.m. The approaches to the town are in a very primitive state, deep ruts and ditches here and there; on the right are the magnificent barracks of the Stadt Artillery. The dwelling-houses are very neat, chiefly of brick, with pretty garden-plots and verandahs. All the important buildings of the town are in the Square. In the centre of the Square is an unfinished monument to "Gom Paul"—only the pedestal, which stands about 35 feet in height, had been completed. In the streets are magnificent shops. On the road back I saw President Kruger's house, a one-storeyed building with a verandah, and a couple of lions in front; posted at the entrance are the stiff sentries. Directly opposite is the new Dutch Reformed Church, an artistic brick building with stone facings, and a neat clock-tower with blue-faced dials. The characteristic features of the Dutch churches out here are their tasteful designs. On the Saturday we had a couple of operations on, dressing all day. One operation was rather interesting. A Guardsman got a bullet into the palm of his hand through a comrade throwing a cartridge into the fire; poisoning set in, so the hand had to be opened up and drained. However, it was saved. Another chap had a forefinger amputated as a result of a prick with a thorn. On Friday, we shifted our hospital to the artillery barracks, which are a very fine pile of brick buildings with cement



floors. All the buildings are well lighted by incandescent electric lamps; above each cot is a cupboard with a locker; all the beds on the first floor were used for patients. A small room was selected for the surgery, the cupboards being used for drugs and dressings. In a neighbouring gun-shed a case containing about 1501-lb. bottles of chloroform were found and commandeered. In the afternoon a batch of fourteen wounded arrived, and in several instances explosive bullets had been used. The entrance-wound caused by this bullet is usually about the size of a threepenny-piece, and the exit-wound the size of a two-shilling piece. There were several marvellous escapes: one chap was shot through the back of the head under the scalp without doing any damage, and in another case the bullet had passed dangerously near the heart. Enteric patients are receiving chlorine-mixture, prepared by mixing about 5ij. pot. chlor. to 3iij. ac. hydrochlor., making up with water. A tremendous store of antiseptic dressings has been commandeered in town; these have been sent to the Boers by almost every Red Cross Society in the world. A hospital has been opened at the Stadt Model School, where the seriously wounded will be attended to by Dr. Watson Cheyne, consulting-surgeon to the 7th Division. The mails have not come up country yet; the last one was received at Kroonstadt. The health of the compounders attached to this hospital continues excellent. G. M.

ANOTHER COMPOUNDER traverses much the same route as our correspondent above, but we have his letter later, and have merely selected a few paragraphs from the end as follows:—

Then on for Pretoria, the impregnable city, where the great stand that we had heard so much of, and had been promised successively at Zand River, Kroonstadt, and the Vaal, was at last to come off. But it did not. On June 4 we gave Brer Boer a terrific bombardment. By Jove! it was ear-splitting. I was up in the firing-line, so I heard it to advantage, and the next morning we marched into Pretoria, and at 2.18 p.m. the good old flag waved in Oom Paul's kraal. I have seen Oom Paul's house, with its Boer sentries and the old man smoking his pipe under the verandah, and now you can see it with a couple of guardsmen with fixed bayonets and British officers sitting round. But the unfortunate part of the business is the beggars have scooted again. Our company has taken over the racecourse buildings, and converted them into a hospital. We are very busy indeed; 350 patients already. You have, of course, heard all about the escape of the prisoners from Waterval. Well, we have any amount of them in here, and in a bad condition many of them are. We have a very snug surgery, my brother compounder and myself, plenty of drugs, tables and chairs, and if we have no beds, at least we have a roof over our heads. Since February 11 we have had neither roof nor tent. I guess I have roughed it these last five months. Now we are in at least semi-civilised quarters. We have had no mails for ages. We heard a rumour to-day that our mails are captured and burnt by the Boers.

We have heaps of work to do, the two of us, with all these patients, especially as we have a lot of dressings to do, but the long evenings pass away quickly now, with candle, book, and a pipe, which is a pleasant change after five months of the veldt. We do not know how long we shall stay here; I suppose that depends a good deal on the course of events.

I am trying to get my discharge, but am afraid I shall not be able to manage it. However, the major is going to do all he can for me. I am afraid I could never settle down to humdrum life again after the adventurous and knockabout life I have led for the last few years. I never felt so well in my life, but I do not think you would recognise me if you met me in the street. I have just looked at myself in the glass—broad-brimmed smasher hat, mahogany-coloured face, dirty, ragged khaki uniform. No, you would pass me by; do not know *him*! Tell any one who asks, I am doing fine, and have marched every inch of the way with Lord Roberts' army from Graspan to Pretoria. God save the Queen! F. W. S.

CIVIL-COMPOUNDER SWINDELLS writes as follows to Mr. W. L. Longstaff, of Fulham Road (author of "The Tragedy of the Lady Palmist"), as follows:—

Tin Town Hospital, Ladysmith, Natal,

June 30, 1900.

After being twenty-four hours in the train we got to Ladysmith, and found the place in a bad way, houses and shops simply smashed up entirely. The Town Hall looks very miserable with a big hole in its tower. I daresay you saw in the *C. & D.* the account of the siege, by Adams, one of the chemists here. Our camp is nearly three miles from the town. We had nearly 1,200 patients when I got here, but now there are only about 500, as they are sending them away as fast as possible, and we are all shifting down to Howick, near Maritzburg. We have a nice dispensary here, but the work is necessarily rough, as also is the living.

I daresay you will wonder why I enclose the press notice of your book. Three of us one day went up Surprise Hill, which the Boers occupied while besieging the town. The Boers were driven

off and guns captured by a brilliant night sortie about last December. When we were nearly at the top one of my friends, looking at the paper on the ground, read aloud the title of it, and, to my surprise, I found it was the announcement of your book. So I picked it up and have enclosed it, as it seemed so very curious to come across that out here. I expect I shall soon be home again now, as I think the war is nearly over. I should like to stay out here, but I am afraid they will not give me my discharge.

## From the Seat of War.

LADYSMITH.

MR. ALFRED ADAMS, L.P.S.I., of Ladysmith, Natal, the inventor of "Chevril," which was of such great benefit to the garrison troops under General White during the siege of Ladysmith, gave us a call last week. He is home with Mrs. Adams for a well-earned holiday, and is slowly recovering from an attack of fever and the evil consequences of semi-starvation which he, with all the other gallant defenders, endured from November, 1899, to March, 1900. Mr. Adams is one of two chemists in business in Ladysmith, and, as will be remembered, sent us a long and interesting account of the siege with illustrations, which we printed in *THE CHEMIST AND DRUGGIST* of May 5, page 743. Mr. Adams tells us that the sufferings from semi-starvation and improper food were very acute, and one can fully understand this when one learns that for use in the hospitals they had to fall back on a compound made of baked starch and the coarse meal of Indian corn. The resulting "food" was something like "stick-fast" paste and sawdust baked hard—so hard, indeed, that it was almost necessary to use a hatchet to break it up. We asked Mr. Adams how it came about that he was able to supply such a large amount of stuff to the R.A.M.C. authorities at Ladysmith, and the answer showed the business-man at once.

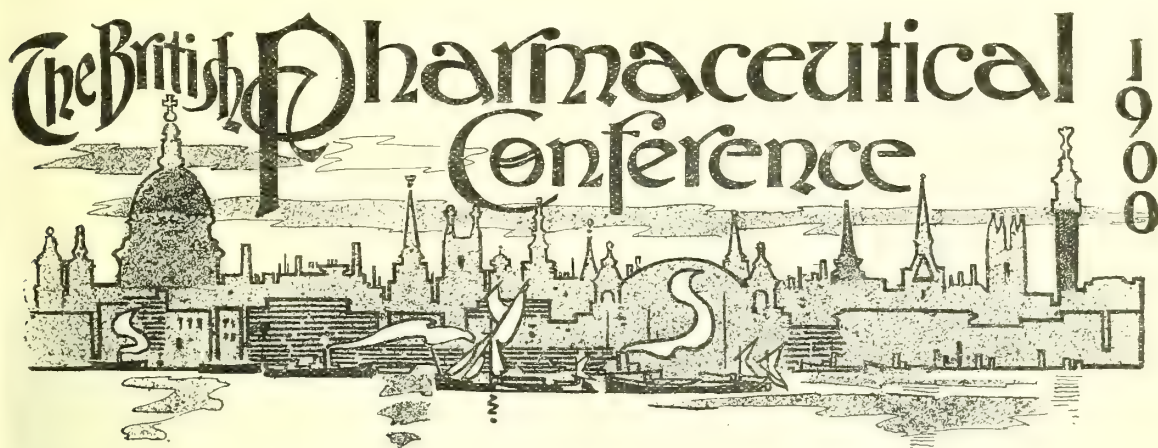
"When I saw the troops keep on coming up," he said, "with apparently no stores or medical necessities at hand sufficient to keep them supplied for any length of time, I wired to Durban for everything I could get, and I fortunately managed, with the use of a little 'palm oil,' to get up everything I required. In fact, I made journeys to Durban myself, bringing up packages as personal luggage."

From what our visitor tells us about the camp at Intombi Spruit, to which Sir Charles Dilke has already referred in the House of Commons, we are led to imagine that Mr. Burdett-Coutts, if he succeeds in getting the Medical Department of the War Office swept clean of its defects and red tape, will have earned the gratitude not only of the fighting-line of the army, but of the nation at large. Mr. Adams ascribes the outbreak of enteric to the entire absence of sanitation, rather than to foul water, as is usually stated.

MAFEKING.

Strangely enough, two days later Mr. J. E. Jones, manager of Mr. Cooper's pharmacy at Mafeking during the siege, called upon us in Cannon Street. Mr. Jones was a member of the town guard, and did duty in one of the many forts which Colonel Baden-Powell had built for the defence of Mafeking during its bombardment by the Boers. After serving in the outer fortifications for something like a month, Mr. Jones was chosen by the commanding officer to undertake part, if not all, of the dispensing in connection with the hospital work in the town. Mr. Jones, of course, speaks very highly of the defenders and their commanding officer. He (Baden Powell) and the men of the various police forces which formed the major part of the garrison were just the right men for the work, as many of them with their leader had long experience in Matabele and other native campaigns. Mr. Jones tells us that they were pressed for some months for want of provisions, and early in the siege he determined to try the effect of the tight belt to keep away the gnawings of hunger. He thinks it is a very effective remedy, and that he would have had a much harder time if he had not worn his tight belt and been able with others in the garrison to get a constant supply of tobacco. Mr. Jones will be some time in this country, and is at present staying with his family at Swinton, Yorkshire. He is thinking, if he can arrange it, of getting further experience in English pharmacy before he goes back to South Africa.





MET IN LONDON FROM MONDAY TO THURSDAY, JULY 23 to 26.

THE PRESIDENT'S ADDRESS IS PRINTED ON PAGE 190.

THE PAPERS ARE PRINTED IN A SECTION BEGINNING PAGE 153.

THE PROCEEDINGS ARE REPORTED ON PAGE 195 *et seq.*

THE PLEASANTRIES ARE ALSO DEALT WITH AND ILLUSTRATED.

**T**WENTY-SIX years ago the Conference met in London under the Presidency of Mr. Thomas B. Groves, F.C.S., and Mr. Michael Carteighe, F.C.S., was Local Secretary. It was the eleventh annual meeting of the Conference, so that this year's meeting makes the thirty-seventh.

In 1874 "the President, Vice-President, and Council of the Pharmaceutical Society of Great Britain invited the members of the British Pharmaceutical Conference to a *conversazione* in the House of the Society, at 8 P.M.," the date being Wednesday, August 5. The Conference met on the Thursday and Friday, and we note that the local committee invited "all gentlemen" attending the meetings to luncheon between 12.30 and 2 P.M. We leave the record which follows to supply the contrast, but may mention, as facts deserving of recall, that twenty-eight papers were communicated to the 1874 meeting, Mr. Louis Siebold was elected editor of the Yearbook, the membership appeared to be about 1,500, and the year began with a balance of 4*l.* 6*s.* 4*d.*, and finished with 3*l.* 8*s.* 9*d.*

#### THE PRESIDENT OF 1900.

As a boy and an apprentice Mr. Edward Morell Holmes carried off the Pharmaceutical Society's bronze medal for a herbarium of British plants. He is now known the wide world over as a botanist and pharmacognosist, and his pre-eminence in these departments of knowledge was signalled three years ago when the first Flückiger medal was conferred upon him by our German *confrères*. Mr. Holmes's long association with the Pharmaceutical Society as curator of its museums has naturally brought him into prominence, and his publications during that period have been numerous and original. They reflect the man, not the office, for there is no record that his predecessors did much else than keep their place tidy. Mr. Holmes has made his museum as well-known as himself, and from youth to the silver-haired stage of manhood he has served succeeding races of students without losing, but immensely gaining in affection of those who have sought information from him.

On a bright May day this summer, when the rhododendrons were all a-bloom, the writer was walking leisurely through the lanes of Sevenoaks, with Mr. Holmes as guide. By-and-by we came to a patch of garden in a farmyard, and, on entering, found a little wilderness of medicinal-plants, some rare, some common, but all typical of something, and natives

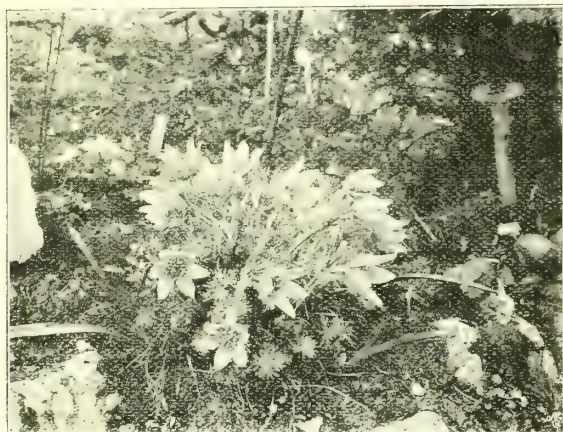
of different climes. This was Mr. Holmes's overflow nursery from which he supplies Square students and others with fresh specimens. Then we shut the gate upon the rheum and veratrum and walked higher up the hill to the botanical headquarters, a very ordinary garden in area and environment, but unique in almost every other respect. "Try these weeds," said our host, as he brought out a box of fine Havannas. And we sat on the garden seat, the writer meditative in a nicotianian cloud, and his host talking of the garden. He seemed proudest of his apple and pear trees, selected so as to bear fruit successively; while our interest was centred in the four or five hundred different species of plants which grow in the garden. It was not long before the fact was revealed that the garden is devoted chiefly to three special purposes—first, the growth of medicinal or economic plants; second, the perpetuation of rare British species by bringing living specimens from habitats where they are becoming extinct, and by endeavouring to grow them to secure fresh supplies for investigation at any time; third, the growth of plants which look alike, but really belong to different natural orders or families; and lastly, to grow plants which by their abnormal development reveal nature's secrets.

It is a garden which in general outline does not differ much in appearance from many other rural gardens, except that there is a modicum of show about it. But so different when one begins to get to particulars. For example, in one side strip there were several kinds of soil; one patch made up of peat to grow moorland plants in, another chalky, a third, which should have been granite, is regularly fed with kieselguhr so that the plants may get the silica they hunger for, and others which are miniature morasses. But all come to the same thing—exact study of the native haunts of plants, the soil they need, the moisture or dryness required, and even the temperature most suitable for their health's sake. Finding need for perpetuating rare bog plants, Mr. Holmes promptly buries a tub in the ground, and lo! in a season you get within a narrow circle specimens which either recall a holiday memory or some gifted naturalist. The tub is plentiful in the "Ruthven" garden, and it is typical, because every detail of shade, soil, exposure, and fertiliser is determined by Mr. Holmes, either by inquiry or experiment, in order to get notable plants to grow. Some of the pictures



which we print show a few of the things that were in flower about the beginning of May. The inscriptions tell what they are.

To give an idea of how space is utilised in the villa garden, we may state that in one corner, measuring 4 feet by 2½ feet,

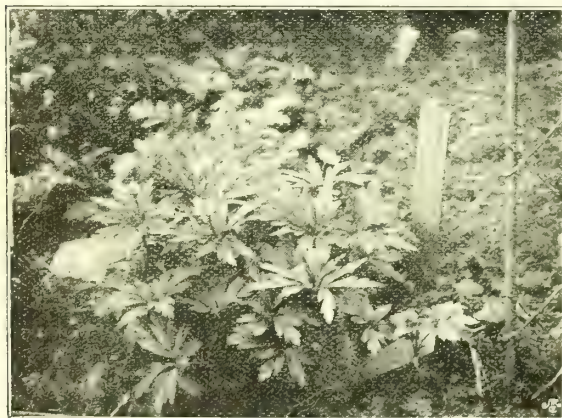


ANEMONE PULSATILLA.

On the left is *Anemone blanda* in flower, and on the right below *Cochlearia danica* in flower.

we counted eighteen distinct plants, including the *Rhamnus* which interest druggists—viz., the old *Rhamnus frangula*, the plant which officially yields cascara sagrada (*R. Purshianus*), and the evergreen *R. californica*, which is supposed to yield some of the bark that comes into commerce.

Mr. Holmes is in constant correspondence with the leading botanical gardens of the world, and with investigating pharmacognosists, so that one finds in his garden plants which have a personal history attached to them. Thus the *Allium Macleani*, which can be seen in one of the pictures, was grown from a bulb given to him by the late Dr. Aitchison, and from him also Mr. Holmes got his plants of *Perula Narthex* and *F. fetidissima* (a native of Turkestan). Both yield asafetida, but it is doubtful if either supplies the asafetida of commerce, and after examining the differences between these plants and the peculiarities of others which are reputed to



ANEMONE RANUNCULOIDES IN FLOWER.

Behind it is the blue poppy, *Meconopsis Wallichii*. On the left a plant of *Arctostaphylos uva ursi*. There is a specimen of *Dabæcia polifolia* sheltered in front of the *Anemone*, but its heath-like flowers are scarcely visible in the engraving.

yield alliaceous gum resins, one is compelled to come to the conclusion that some living specimens do not agree with the

text-books. A magnificent specimen of the sumbul plant had given up the ghost a few weeks before our visit. The root-stock measured 8 inches in diameter. While it was alive Mr. Holmes extracted a great deal of information from the plant and now that it is dead he may get a few pounds of drug from it. Not far from it we found clumps of *Aconitum Napellus*, henbane, and belladonna, and there were good plants of *Aconitum ferox*, which Dr. Watt, of Calcutta, had sent to him. We also observed a healthy *Salix nigra*, the bark of which has not the characteristics of the commercial "black willow," so that the latter has yet to be traced to its



SCOPOLIA CARNIOLICA, VAR. CONCOLOR, IN FLOWER.

This is the plant which was investigated at Marburg under the name *Scopolia Hladnickiana*. The root originally came from Marburg Botanic Gardens.

source. In one of the greenhouses the quaint *Anhalonium Levini* was growing in pots, and showing evidence of flowering; indeed, everywhere in Mr. Holmes's garden one finds familiar or rare things, so that it is not surprising that



GAZEA LUTEA IN FLOWER.

The large drooping leaves are those of *Allium Macleani*, the "Royal Salep." The pinnate leaf on the right is *Dentaria bulbifera*, and the ternate leaves in front are those of the humble *Oxalis acetosella*.

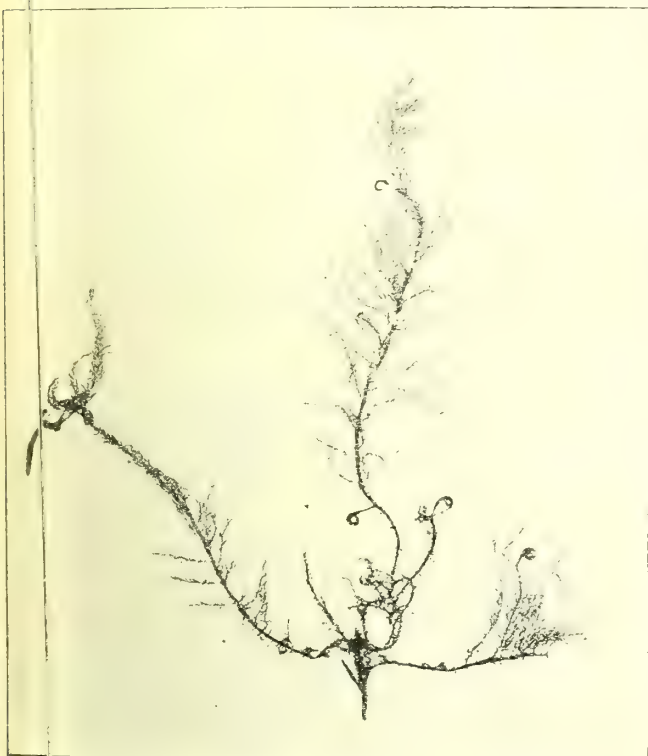
many botanists and pharmacists who are intimate with the genial gardener (Mr. Holmes does all but the roughest work himself) go to him for information on many points.

It is a mistake to suppose that Mr. Holmes is a mere pharmacognosist, a prosaic keeper of a museum. This past week, it is true, he has had the opportunity of showing his



versatility as a pharmacist in his Conferential duties, but his gifts as a naturalist seem to us more worthy of remark,

One day, far back in the sixties, a pedlar came into his pharmacy in Plymouth selling books, and from them the young pharmacist selected an old work on mosses. When he read it he found that he had known little about mosses, and straightway he began to collect



*BONNEMAISONIA LAMIFERA.*

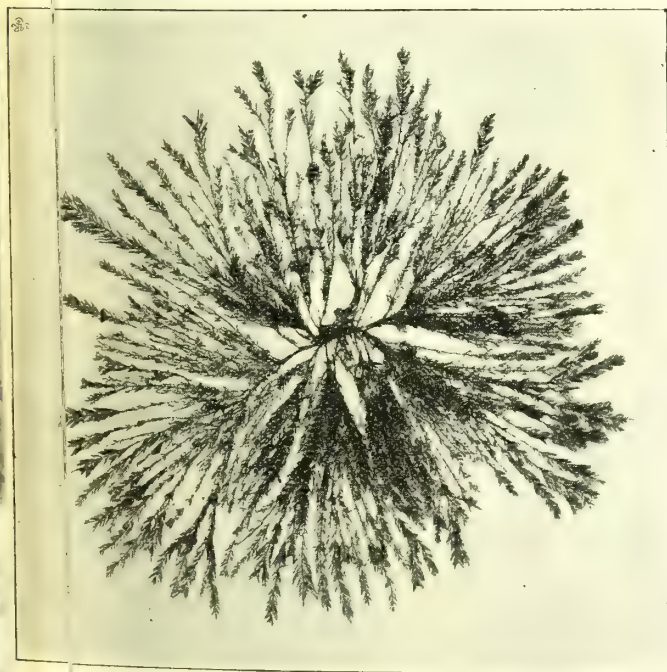
Japanese seaweed naturalised in Hampshire and Cornwall, but not known anywhere else except in Japan.



*DICTYOSPHA MESOGLOCA.*

One of three new British marine algae found on a first visit to Scotland.

mosses. He found some that were not named in books, and added to his knowledge of plant after plant until he had one of the completest collections in the kingdom. From mosses to lichens was an easy transition, and this he accomplished, again adding new British species to those that were known. In both departments he became, and remains, a recognised autho-



*SPHACELARIA PLUMIGERA.*

One of the first marine algae described by Mr. Holmes.

especially as few in pharmacy are familiar with this side of his achievements.



*MYRIOCLADEA LOVENII.*

Found only at Brighton and in the Baltic.

rity. Next he turned his attention to seaweeds, and here we hesitate even to refer in general terms to his accomplishments, for at the present time he stands *facile princeps* in the United Kingdom. But one man is there to rank with him, his co-worker, Mr. E. A. L. Batters, B.A., LL.B., F.L.S., with whom he compiled "a revised list of British algae," and Mr. Batters was virtually his pupil. When Mr. Holmes commenced to

Collect algæ there were 400 known British species. To these he and his friends have added 350, some previously undescribed as British and some new to science. His collection is unique. We have photographed a few pretty varieties, one or two of which have just got names, but these are purely for illustrative purposes. His collection contains specimens which open one's eyes as to the mysteries of nature. Hard coral-like things that require a strong stretch of the imagination to figure as plants; bits of stone, with patches of dried carmine-like solution upon them, which Mr. Holmes assures one are algæ. They are stones such as one kicks aside on the seashore in ignorance of the rarity which he is clearing from his path.

The algæ happen to reflect Mr. Holmes's character admirably. No one who has gone to him in his official capacity in search of information has ever had occasion to feel that most common of London suspicions, "What is this man to do with what I tell him?" He gives frankly and freely of what he knows; without suspicion, with evident desire to spread knowledge. And so it is with the algæ. The new things that he finds are carefully gathered to the extent of thirty specimens or so of each. As the man who names them he selects typical specimens for his own collection, and the rest, to the extent of twenty-five of each, go to form fasciculi, entitled *Algæ Britannicæ Rariores*.

Each of these fasciculi contains twenty-five specimens, of which twenty are new to Britain and five are very rare species, and nine series have been issued. The tenth is in the course of formation. So that Mr. Holmes has supplied to specialists in this department of knowledge (but chiefly to the principal museums of this country) no fewer than 180 out of the 350 new algæ, and forty-five species rarely seen in collections.

All this is easily said, but it may not be out of place to add that the specimens are carefully prepared and mounted. Each one is named (the name being found for it in most cases), the place of discovery stated, when it was found and by whom, and each specimen is sold at a trifle less than 1s., for the subscription rate is a guinea per fasciculus. Besides, Mr. Holmes has always been careful to record his discoveries so that others who work in the same line may have full information in respect to the new things. That means much labour. We need only take one example to explain what this implies—the paper which he communicated to the Linnean Society a few years ago on "New Marine Algæ from Japan." It contains exquisitely-drawn figures, by J. N. Fitch under his supervision, of seventeen new species of algæ, and descriptions (including the Latin description for international purposes) of each one. Twenty-two new species and varieties were thus described, and as an appendix the paper contained a list of British marine algæ occurring also in Japan. In this connection we may call attention to the Japanese seaweed which we figure, and which Mr. Holmes collected in Falmouth, evidently acclimatised to our shores as the truly British algæ adherent to it prove. In this work Mr. Holmes is fortunate in having the assistance of his wife, who as a companion on many of his algæ-hunting excursions has been infected with his enthusiasm and has caught some of the sharpness of his eyes for new things. One of the specimens which we reproduce is from her brush; we do not say which it is, for we must ask our readers to share the deception which we suffered from the original.

There are a few pharmacists in Great Britain whose friendship with Mr. Holmes has enabled them to discover his distinction apart from his office as curator of the Pharmaceutical Society's Museum. There are also a few, "a very few," who only know him as a curator. When last-year's

Conference elected him President, that was done because the members liked him, but behind this was the fact that he has contributed more to the botanical side of British pharmaceutical literature than any other man living.

#### ORDER OF CONFERENCE BUSINESS.

Those who attended the conversazione held in the Hôtel Métropole on Monday evening heard that the Pharmaceutical Society had engaged the Throne Room of the Holborn Restaurant for the opening session of the Conference the next day. This gave the conferees more room, but the acoustic properties were not so good as those of the lecture-theatre in Bloomsbury Square, where the other sessions were held. The following is the official programme as first arranged by the committee:—

*Tuesday, July 24.*

Address of welcome by the President of the Pharmaceutical Society (G. T. W. Newsholme, Esq.).

President's address.

Reception of Delegates.

Report of Executive Committee.

Financial statement.

Report of Treasurer of the "Bell and Hills" Library Fund.

Report of Unofficial Formulary Committee. By N. H. Martin, F.L.S.

Reading of papers and discussions thereon.

#### PAPERS.

1. "Report on Santalwood Oil." By Ernest J. Parry, B.Sc.
2. "Almond Oil and its Substitutes." By W. C. Allen and E. T. Brewis, F.I.C.
3. "Some Observations and Suggestions relating to the Chemistry of the British Pharmacopœia." By Frederick B. Power, Ph.D.
4. "Ash in Drugs." By C. G. Moor, M.A., and M. Priest, F.C.S.
5. "Some Pharmaceutical Tinctures." By J. C. McWalter, L.R.C.S.I., L.A.H.I.
6. "Notes on Some Indian Drugs." By W. Mair, F.C.S.
7. "Contribution to the Pharmacognosy of Official Strophanthus-seeds." By P. E. F. Perrédès.
8. "The Pharmaceutical Plants of Jamaica." By Theo. H. Wardleworth.
9. "Laboratory Notes." By F. C. J. Bird.
10. "Asafetida Preparata." By H. W. Jones, F.C.S.
11. "Mercurous Iodide." By Frederick B. Power, Ph.D.
12. "The Composition of Berberine Phosphate." By Frank Shedden, B.Sc., A.I.C.

*Wednesday, July 25.*

Reception of Delegates.

Reading of papers and discussions thereon.

#### PAPERS.

13. "Examination of Commercial Samples of Liquor Ferri Phosphatis cum Quinina et Strychnina." By H. J. Henderson.
14. "Critical Note on the Official Process for the Determination of Strychnine in Galenical Preparations of Nux Vomica." By E. H. Farr, F.C.S., and R. Wright, F.C.S.
15. "Note on Liq. Ferri Perchloridi." By Thomas Tyrer, F.I.C., and Albert Levy.
16. "Turpentine Oil and Terebene." By C. T. Tyrer, F.C.S., and Alfred Wertheimer.
17. "Determination of Correct Melting-points." By Thomas Tyrer, F.I.C., and Albert Levy.
18. "Notes on Opium, Olive Oil, and Saccharin." By Edwin Dowzard, F.C.S.
19. "Viscosity of Essential Oils." By Edwin Dowzard, F.C.S.
20. "British Guiana Copaiba." By E. Wightman Bell, F.C.S.
21. "Copaiba: Its Assay and Tests." By E. Wightman Bell, F.C.S.
22. "Phenol Suppositories." By F. R. Dudderidge, F.C.S.
23. "The British Pharmacopœia as a Standard for Articles of Commerce." By D. B. Dott, F.R.S.E.
24. "New Apparatus for the Estimation of Chlorine and Nitrogen." By J. F. Tocher, F.C.S.

Election of Formulary Committee.

Place of meeting for 1901.

Election of officers for 1900-1901.

Only four papers were read on Tuesday. There was also a paper by Mr. A. W. Gerrard on "The Recovery of Menthol and one by Mr. Sargeant on "Belladonna-plaster" withdrawn.



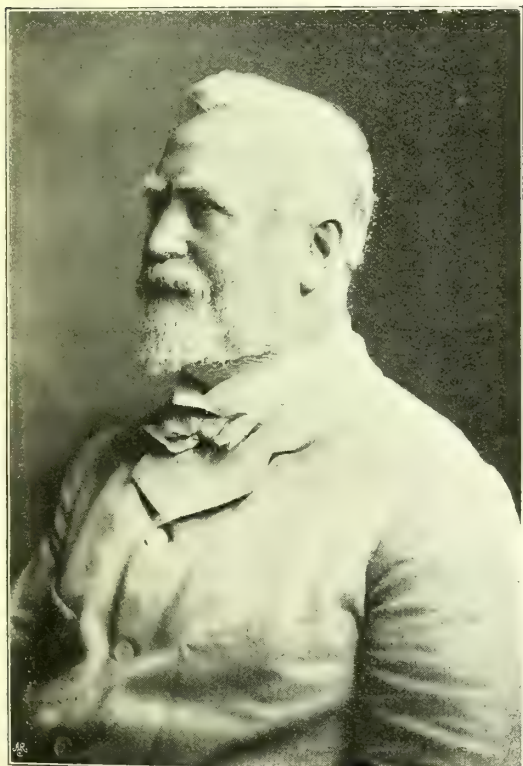


MR. H. CRACKNELL (Hon. Local Secretary).

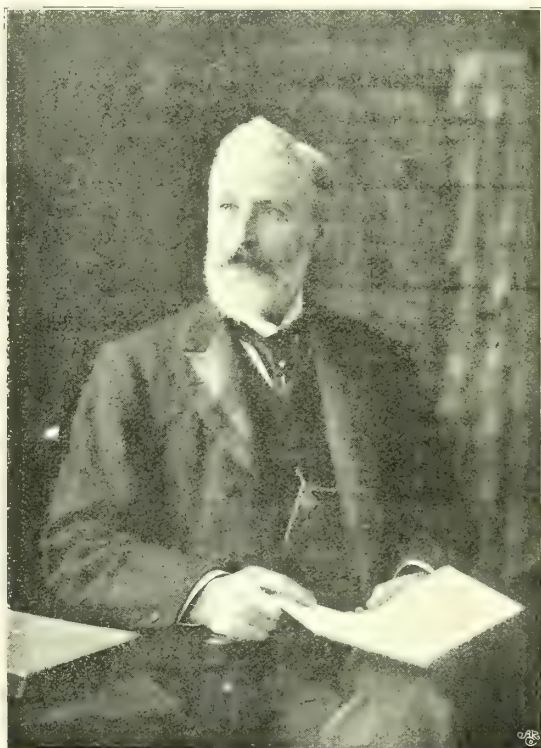
Executive  
of the  
London  
Conference  
Local  
Committee.



MR. WILLIAM WARREN (Hon. Local Secretary).



MR. MICHAEL CARTEIGHE (General-Emeritus).



MR. WM. MARTINDALE (Chairman).



MR. J. F. HARRINGTON.  
Looked after Local Interests.



MR. J. C. UMNEY.  
Looked after the Pleasantries.



MR. J. H. MATHEWS.  
Looked after the Cash.





THE CONSERVATORY, ROYAL BOTANIC GARDENS.

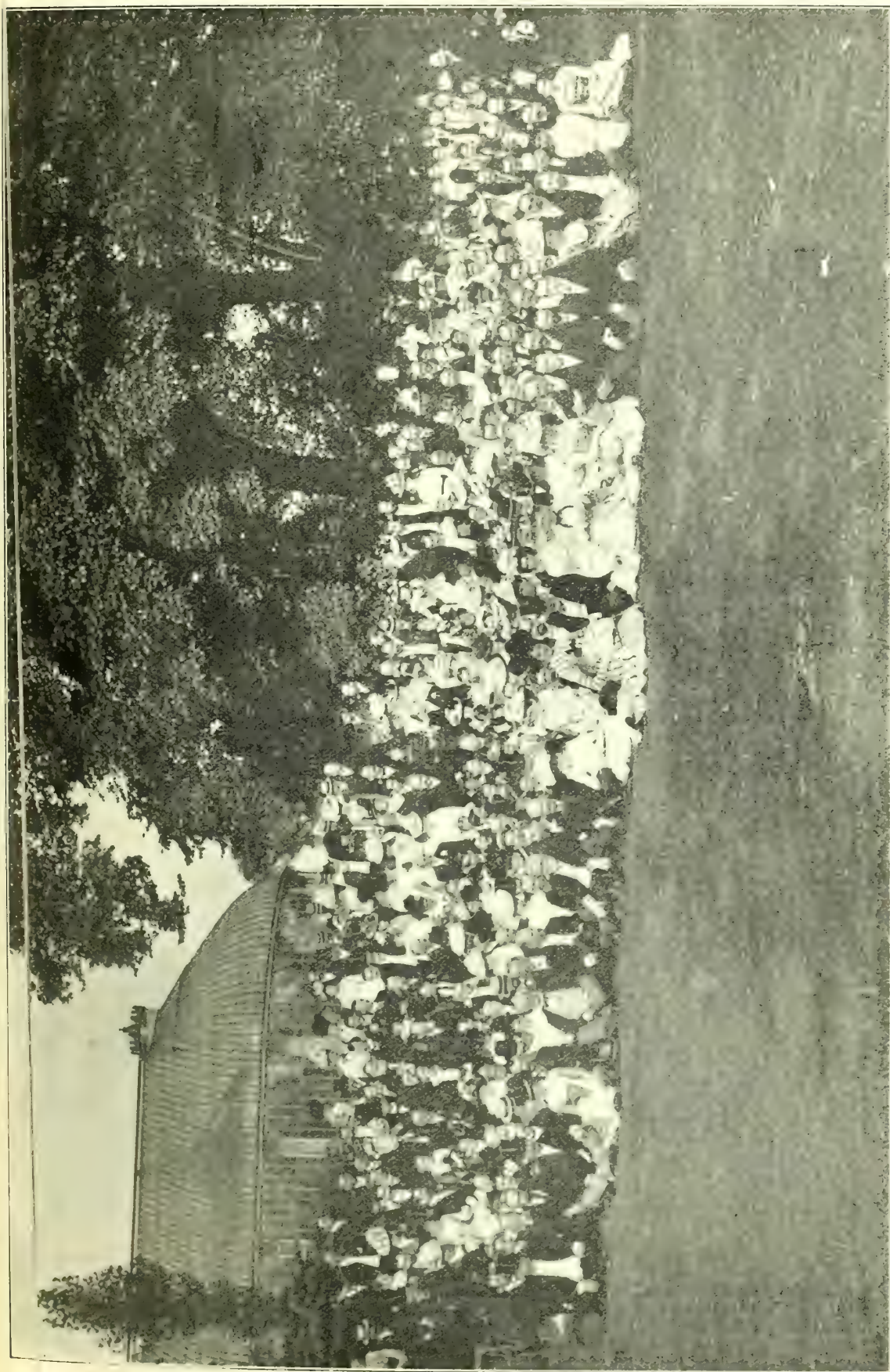
It was outside this crystal palace that the Conference photograph was taken on Tuesday.



THE STUDENTS' PORTION OF THE ROYAL BOTANIC GARDENS.

It was here in "dear old Bentley's" day that students of pharmacy were wont to congregate. A few of them remain in the picture.





THE GARDEN-PARTY. ROYAL BOTANIC GARDENS, ON TUESDAY AFTERNOON, JULY 24.

*From a photograph by the London Stereoscopic Company, Ltd.*  
(See later page.)





HENLEY BRIDGE, THE STARTING OF THE TRIP ON THE THAMES, JULY 26.



MAIDENHEAD BRIDGE, WHERE THE PARTY FINISHED THE RIVER TRIP AND DINED.



# The Papers

## Some Observations and Suggestions relating to the Chemistry of the British Pharmacopœia.

By FREDERICK B. POWER, Ph.D.,  
Director of the Wellcome Chemical Research Laboratories.

The appearance of a new national Pharmacopœia is always an event of considerable interest, for it may reasonably be assumed that it will reflect, so far as is practicable in a work of that character, the progress in the sciences relating to pharmacy and medicine during the period that has elapsed since its last preceding revision. The importance of a new



DR. POWER.

edition of such a work is manifest when it is considered how large a circle it concerns, inasmuch as it is designed to represent a standard to which medical men, pharmacists, public analysts, and chemical or pharmaceutical manufacturers are expected to conform.

It is, therefore, natural—and, indeed, desirable—that the appearance of a new national Pharmacopœia should be

attended by some expressions of opinion on the part of those who are interested in it, and whose work to a greater or less extent is affected by it; for even a work that is issued "by authority" can hardly be expected to be perfectly free from errors and defects, however much care may be bestowed on its compilation.

The comments that immediately follow the publication of such a work, in so far as they represent only first impressions, are apt to be somewhat superficial in their character, and therefore as likely to err in bestowing unqualified praise as in the severity of the criticisms. On the other hand, there are also from time to time some facts brought to notice which possess positive and lasting value, and are therefore worthy of careful consideration. These may relate either to actual errors in the text, to the impracticability of particular requirements, or to suggestions for further improvements in descriptions or processes.

The Committee of Revision of the United States Pharmacopœia have long recognised the value of such observations or criticisms, and, having taken pains to collate them from every available source, publish them under the title "Digest of Criticisms," for gratuitous distribution to the medical and pharmaceutical bodies and persons concerned, thereby getting considerable aid in the preparation of a subsequent edition of the U.S.P.

Although the chemistry of the British Pharmacopœia has already received some consideration at the hands of the critics, the published papers and discussions relating thereto have been somewhat fragmentary, and no attempt appears to have been made to subject it to a more complete and systematic review. In the present paper some errors are indicated. The criticisms of the officially-described

characters or tests have been, so far as possible, substantiated by experiment, the aim being to impart to the criticisms a constructive character.

Whenever in the following notes the Pharmacopœia is cited the British Pharmacopœia is intended.

**Acetanilide.**—The text contains some errors of a particularly interesting character. It is stated, for example, that "on boiling with test-solution of ferric chloride a reddish-brown colour is produced, and this is almost entirely discharged by hydrochloric acid." Test-solution of ferric chloride alone becomes reddish-brown on boiling, owing to the formation of a basic salt, although if the solution is sufficiently dilute it may remain perfectly clear (compare Schmidt, "Pharm. Chemie," 3rd edit., vol. i. page 764). The Swiss Pharmacopœia (*Editio tertia*), 1893, strangely enough, contains the same error. If this test be made with a cold saturated aqueous solution of antifebrin, and also with distilled water to which the same amount of solution of ferric chloride has been added, there is practically no difference in the colour of the two liquids after boiling, and precisely the same yellow colour is produced in both on the subsequent addition of hydrochloric acid, as the Swiss Pharmacopœia directs. The conclusion must be that this test has been formulated by someone who was not familiar with the change of colour produced in a solution of ferric chloride on boiling. In this connection attention may also be called to the official test-solution of ferric chloride (page 415), which is directed to be made from commercial anhydrous ferric chloride. The questions arise whether there is any anhydrous ferric chloride except the commercial, and whether the anhydrous salt is really intended. The ordinary commercial ferric chloride, occurring in crystalline masses, has the composition  $\text{Fe}_2\text{Cl}_6 \cdot 12\text{H}_2\text{O}$ . In ordering the anhydrous salt from one of the large London dealers in chemicals, the writer was informed that it would be necessary to send to the Continent for it. It is also not obvious what advantage there can be in the use of the anhydrous salt for the purposes of a test-solution of ferric chloride, as it requires to be dissolved in water, and it costs about ten times the price of the ordinary crystallised salt.

Another most peculiar error in the text for acetanilide is included in the following statement: "A cold saturated aqueous solution . . . is not affected by test-solution of ferric chloride (absence of acetone, &c.)." It would be somewhat surprising in the first place if dry crystallised acetanilide should be capable of containing as an impurity such a very volatile liquid as acetone, for experiment has shown that even when crystallised from the latter it does not combine with it, and, furthermore, acetone gives no very specific reaction with ferric chloride. A cold aqueous saturated solution of acetanilide which had been freshly crystallised from acetone was prepared, and, as was to be expected, this was no more affected by ferric chloride than an equal volume of distilled water, and even considerable acetone may be added to such a solution without any visible change. In fact, pure acetone gives but a faint yellowish colour with ferric chloride—not at all comparable in intensity, for example, to the colour afforded by absolute alcohol. This test for acetone appears, moreover, to be based upon a misinterpretation of Gerhardt's test for the detection of acetone in urine (see also *Pharm. Journ.*, April, 1899, page 387). It does not really detect acetone, or, at least, only indirectly, but rather the so-called ethyl diacetic acid, now known as ethyl aceto-acetic ester,  $\text{C}_6\text{H}_{10}\text{O}_5$  or  $\text{CH}_3\text{—CO—CH}_2\text{—CO}_2\text{C}_2\text{H}_5$ , which gives a purple colour with ferric chloride. Thus it is stated in Neubauer and Vogel's "Analysis of the Urine," American, from the seventh German edition, New York, 1879, page 158, "Gerhardt first laid stress on the fact that a diabetic urine in which acetone is contained or formed is at the same time characterised by a remarkable reaction—namely, treated with ferric chloride, a deep red-brown colour is produced. This reaction corresponds with the demeanour of ethyl diacetic acid discovered by Geuther, which decomposes with great readiness into acetone, alcohol, and carbonic acid." For some remarks on the detection of phenacetin in acetanilide, see *P.J.*, April 1899, pages 367, 402.

**Glacial Acetic Acid.**—Mr. J. C. Umney (*P.J.*, August, 1898, page 242, and January, 1900, page 8) has noted a discrepancy between the required strength and the melting-point.

**Arsenious Acid.**—Although from long usage the title acidum



arseniosum (arsenious acid) may not be considered incorrect, the writer would prefer that of acidum arsenosum (arsenous acid), as adopted by the U.S.P., and which corresponds to the analogous phosphorous acid. It would also conform with the change in Pharmacopœia nomenclature from arseniate to arsenate, and from arsenias to arsenans.

**Benzoic Acid.**—This is stated to be "obtained from benzoïn by sublimation," but it is also obtained from benzoïn, and probably much more largely, in the wet way, by the lime method. It is probably not intended to exclude the latter product, since the Pharmacopœia permits the acid to be obtained from toluene and other compounds. The German and Swiss Pharmacopœias restrict the benzoic acid to that obtained from benzoïn by sublimation, whereas the French Codex, under a distinct title, also recognises that prepared from benzoïn in the wet way.

**Boric Acid.**—The synonym, hydrogen borate, has been criticised as being somewhat out of place in a Pharmacopœia. The statement that "boric acid liquefies when warmed, and on careful heating loses 43.6 per cent. of its weight," is vague and gives an incorrect idea of its behaviour. As stated in the U.S.P. and in chemical text-books, and as more recently noted by E. Merck (THE CHEMIST AND DRUGGIST, August, 1898, page 349), when boric acid is heated to 100° C. it is converted into metaboric acid,  $\text{HBO}_2$ , which slowly volatilises at that temperature. The metaboric acid fuses at 160° C., by prolonged heating at the latter temperature, tetraboric acid,  $\text{H}_2\text{B}_4\text{O}_7$ , is formed, and it is only by strong ignition that boron trioxide or sesquioxide,  $\text{B}_2\text{O}_3$ , is obtained, which is the compound corresponding to the loss of weight indicated by the Pharmacopœia.

**Citric Acid.**—David Howard (THE CHEMIST AND DRUGGIST, April, 1898, page 675) has called attention to the unsatisfactory character of the Pharmacopœia tests for lead in citric and tartaric acids. He notes that by requiring the acid to be neutralised with solution of ammonia, if the exact point of neutrality is passed a dark coloration with hydrogen sulphide may be caused by the presence of traces of iron as well as of lead. The United States, German and Swiss Pharmacopœias avoid the possibility of such a mistake by directing the acid to be only partly or approximately neutralised with ammonia.

**Gallic Acid.**—The Pharmacopœia states that the aqueous solution of this acid is not precipitated by tartarated antimony (showing absence of tannic acid). This error has been noticed by Dr. Sillar and D. B. Dott (P.J., December, 1898, page 684, and January, 1899, page 58). It also appears in the Swiss Pharmacopœia. If, for example, to 1 c.c. of an aqueous solution of gallic acid 5 c.c. of a saturated aqueous solution of tartarated antimony be added, a white precipitate is soon formed, and the filtered liquid then affords but a very slight reaction with ferric chloride, thus proving that the gallic acid is quite completely precipitated. The above incorrect statement has also been copied into Hager's "Handbuch." Beilstein ("Handbuch der organischen Chemie," vol. ii., page 1,920) mentions a gallate of antimony, of uncertain composition, as an insoluble precipitate.

**Hydrobromic Acid.**—A new and most excellent method for preparing this acid in a pure state has recently been published by Dr. A. Scott, F.R.S. (Journ. Chem. Soc., 1900, page 648).

**Phosphoric Acid.**—The Pharmacopœia states that this "may be prepared by treating with water and nitric acid the residue left after burning phosphorus in air." It is not the residue left after burning phosphorus, but the product of its combustion in the air, from which phosphoric acid may be prepared.

**Salicylic Acid.**—The Pharmacopœia states that the crystals "below 392° F. (200° C.) volatilise without decomposition." This might be made a little more exact, as salicylic acid sublimes slowly at the temperature of a water-bath (about 100° C.).

**Sulphuric Acid.**—Schlagdenhauffen and Pagel (Apoth. Zeit., 1900, No. 36, page 302, from Journ. de Pharm. et de Chim.) have recently noted the frequent occurrence of selenium in sulphuric acid, as out of twelve samples supplied as "chemically pure" only three were found to be free from this contamination. They identified it by means of Dragendorff's codeine reaction, which consists in bringing a little codeine in contact with 5 or 6 drops of sulphuric acid containing selenium, when at ordinary temperatures the liquid soon assumes a green colour. This reaction is of interest, as codeine is stated to form a colourless solution with sulphuric acid, and it does so when the latter is pure, but, as stated in Flickiger's "Reactions" (English translation), page 38, "frequently the reaction fails, and the acid turns somewhat green." The frequent occurrence of selenium in the acid would appear to explain this result. In two samples of English acid tested by the writer, this reaction was not obtained, a chemically pure acid giving a colourless solution with codeine, and a so-called commercial acid producing only a faint rose tint.

**Tannic Acid.**—Under this title the Pharmacopœia makes the following remarkable statement: "Tannic acid,  $\text{C}_{14}\text{H}_{10}\text{O}_9 \cdot 2\text{H}_2\text{O}$ , may be extracted by water-saturated ether from galls which have been subjected to a special fermentation." It seems very strange that tannic acid should contain two molecules, or any definite amount of water, considering the method of its preparation. Beilstein's "Handbuch der org. Chemie," Thorpe's "Dictionary

of Applied Chemistry," Husemann's "Die Pflanzenstoffe," both Schmidt and Flickiger's "Pharm. Chemie," and a number of other works, give the formula simply as  $\text{C}_{14}\text{H}_{10}\text{O}_9$ , without combined water. Only in Richter's "Organic Chemistry," vol. ii., page 231, could the formula with two molecules of water be found. The statement is obviously incorrect, and the only explanation that appears at all probable is that the Pharmacopœia authorities have confused tannic acid with the *b*-digallic acid of Böttiger, to which has been assigned the formula  $\text{C}_{14}\text{H}_{10}\text{O}_9 \cdot 2\text{H}_2\text{O}$  (compare Beilstein's "Handbuch der org. Chemie," Bd. II., page 1,925, and *Berichte der deutsch. chem. Ges.*, 17, page 1,476). Böttiger expressly stated, however, that this substance, although resembling tannin, is not identical with it, inasmuch as on boiling with dilute sulphuric acid it is not converted into gallic acid. It was obtained by heating the ethyl ester of gallic acid with pyroracemic acid (or glyoxylic acid) and sulphuric acid. The *a*-digallic acid of Schiff (Beilstein, *loc. cit.*, page 1,924) was obtained by heating gallic acid with phosphorus oxychloride. It has the formula  $\text{C}_{14}\text{H}_{10}\text{O}_9$ , contains no water, and has all the properties of tannin.

The writer is also not aware that in the preparation of tannic acid the galls are "subjected to a special fermentation," but gallic acid may be prepared by the hydrolysis of tannic acid, either by a ferment or boiling with a dilute acid or alkali (compare Thorpe's "Dictionary," vol. iii., p. 775).

**Aconitine.**—As the Pharmacopœia aims to be conservative as well as authoritative, it seems somewhat questionable whether a formula should be assigned to this alkaloid which even the author of it did not consider definitely established. In some continental works—as, for example, in Hager's "Handbuch," Bd. I., page 147—the slightly different formula of Freund,  $\text{C}_{34}\text{H}_{47}\text{NO}_{11}$ , seems to be preferred. (Compare also *Pharm. Journ.*, vol. ix., 1898, page 394.)

The description, "colourless hexagonal prisms of the rhomb system," would appear to pertain to a specially-prepared specimen and not to the alkaloid as it occurs in commerce, which might be more correctly described as in distinct crystals, or a crystalline powder. The statement that "an alcoholic solution of the alkaloid turns the plane of a ray of polarised light to the right" somewhat cumbersome phrase for indicating that it is optically dextrogyrate would seem to be of very little value unless the degree of rotation is given, for it assures neither the identity nor the purity of the alkaloid.

**Amyl Nitrite.**—In the text there occurs the following sentence:—"Submitted to distillation, about 70 per cent. pass over between 194° and 212° F. (90° and 100° C.), the bulb of the thermometer not dipping below the surface of the residual fluid." It is not clear why the word "residual" is inserted here, as the residual fluid would be that portion remaining after distillation between the limits of temperature mentioned, when the thermometer is no longer required. The bulb of the thermometer should not at any time dip below the surface of the liquid.

**Atropine.**—For some comments on the Pharmacopœia text atropine and atropine sulphate, as also for hyoscyne hydrobromide and hyoscyamine sulphate, see "A Note on the Mydriatic Alkaloids," by Dr. H. A. D. Jowett, *C. & D.*, August, 1898, page 185, and *P.J.*, August, 1898, page 185, and "Some New Gold Salts of Hyoscyne, Hyoscyamine, and Atropine," by the same author (*Journ. Chem. Soc.*, 1897, page 679).

**Bismuth Carbonate.**—In conformity with the official title of bismuth oxyhydrate, the title of this salt would be more correctly *Bismuthi Subcarbonas*. As it is so well known that the oxides of bismuth are not of constant composition, it seems quite explicable that the Pharmacopœia should assign to both the carbonate and the oxyhydrate definite formulas, and require them to yield amounts of bismuth sulphide exactly corresponding to these formulas. These thoroughly impractical requirements for the official bismuth preparations have been criticised by David Howard and E. Merck (*C. & D.*, April, 1898, page 674 and August, 1898, page 348). The sulphide method of determining bismuth does not commend itself, and E. Merck (*loc. cit.*) gives figures which prove that the determination as oxide is more accurate, reliable, and rapid. The absence of non-volatile impurities would, of course, be determined by the usual qualitative tests, and if these were present in any amount a quantitative determination of the bismuth would rarely be required. The variation in composition of these salts is apparent by a comparison of the requirements of some of the Pharmacopœias, as expressed in percentages of bismuth oxide.

**Bismuth Subcarbonate.**—B.P., 89.7 per cent.; U.S.P., 91 per cent.; Ph. Germ. Supp., at least 85 per cent.,  $\text{Bi}_2\text{O}_3$ .

**Bismuth Nitrate.**—B.P., 76.3 per cent.; U.S.P., 79 per cent.; Ph. Germ., 79–82 per cent.; Ph. Helv., about 80 per cent.,  $\text{Bi}_2\text{O}_3$ . Compare also Thoms (*Apoth. Zeit.*, 1898, page 318).

**Bismuth Salicylate.**—The Pharmacopœia text for this salt has already received considerable adverse criticism (see E. Merck, *C. & D.*, August, 1898, page 348; D. Lloyd Howard, *P.J.*, August, 1898, page 233). The requirement that alcohol when shaken with it shall not give a violet colour with ferric chloride can hardly be based on actual observation. The writer has never seen a precipitate.

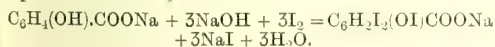


men of the salt, either as found in commerce or however carefully prepared, that would stand this test. There is also an inconsistency in requiring that it shall yield very nearly the theoretical amount of bismuth sulphide—70 per cent. (theory requires 71 per cent.). The theoretical amount of oxide is 64.3 per cent., but the salt is likely to be somewhat more basic, and therefore to afford a little higher percentage of oxide. Several commercial specimens examined by the writer have been found to afford 65–66 per cent. of bismuth oxide, and a very carefully-prepared specimen gave 67 per cent. on ignition. It is difficult to harmonise the requirements that the salt should afford 62–64 per cent. of oxide, and at the same time give no reaction for free salicylic acid, and when theoretically any smaller proportion of oxide than 64.3 per cent. could necessarily indicate the presence of a corresponding amount of free salicylic acid, assuming the absence of other impurities.

For the examination of bismuth salicylate it will usually be found sufficient to determine the amount of oxide afforded by ignition. Some methods have been proposed which include the determination of the amount of salicylic acid in the salt, and these varied with a bismuth salicylate afforded 64.7 per cent. of oxide on ignition:—

I. Kollo (*Proc. Amer. Pharm. Assoc.*, 1899, page 719, from *Pharm. Post*, 1899) recommends heating the bismuth salicylate with a normal solution of potassium hydrate, collecting, drying, and weighing the bismuth hydroxide formed, and calculating it as oxide. The salicylic acid is determined in the filtrate and washings by titrating with normal hydrochloric acid, using phenolphthalein as an indicator. So done (a) 1.9264 gramme the salt gave of  $\text{BiO}(\text{OH})$  dried at  $95^\circ\text{C}$ . 1.2710 gramme 63.52 per cent.  $\text{Bi}_2\text{O}_3$ . After ignition the precipitate weighed 1.2390 gramme = 64.33 per cent.  $\text{Bi}_2\text{O}_3$ . The filtrate on titration indicated 40.8 per cent.  $\text{C}_6\text{H}_4\text{OH.COOH}$ . 1.8530 gramme of the salt gave 1.2095 gramme of bismuth hydroxide = 62.83 per cent.  $\text{Bi}_2\text{O}_3$ , and by titration of the filtrate 47 per cent.  $\text{C}_6\text{H}_4\text{OH.COOH}$ . The calculated amount of salicylic acid in the official compound is 38.45 per cent. The methods cannot be considered satisfactory. The low percentage of bismuth found when weighed as hydroxide is due (1) to the formation of a little oxide, and (2) to the absorption of carbon dioxide by the alkali while heating.

I. Messinger and Vortmann (*Ber. der deutsch. chem. Ges.*, 23, page 2753) propose to precipitate salicylic acid from its solution with an excess of alkali by decinormal iodine solution as sodium iodosalicylic iodide, and, after acidulating and filtering, titrating the excess of iodine in the filtrate with thiosulphate. The reaction takes place as follows:—



Fresenius and Grunhut (*Zeits. anal. Chem.*, 38, page 292) have criticised the method, but Messinger has recently shown that under proper conditions it gives accurate results (*Journ. prakt. Chemie*, 61, page 236, and *Chem. Centralb.*, Bd. I., 1900, page 925). A trial was conducted as follows:—0.4782 gramme of bismuth salicylate was dissolved in dilute hydrochloric acid, the bismuth precipitated by sodium hydrate, filtered, and the filtrate and washings made up to 250 c.c.; 50 c.c. of this alkaline solution was brought into a 100-c.c. stoppered bottle, neutralised with sulphuric acid, and then 0.5 c.c. of a 10-per-cent. solution of sodium hydrate added. The bottle was then placed in a water-bath at  $60^\circ\text{C}$ ., and when warm 31 c.c. of decinormal iodine solution were added, and the bottle kept warm and shaken occasionally for a few minutes. When cool, the contents were acidulated with sulphuric acid, filtered into a flask, and the precipitate washed with a little water. The filtrate required 15.1 c.c. of decinormal thiosulphate showing that 15.9 c.c. of iodine solution had been absorbed. As 1 c.c. of the latter corresponds to 0.0023 gramme of salicylic acid, this indicates 35 per cent. of salicylic acid in the salt. A second titration of 5 c.c. of the filtrate gave precisely the same result. As the calculated amount of salicylic acid is 38.45 per cent., the method may be considered a fairly accurate one. Too large an excess of alkali should not be used.

*Orac.*—E. Merck (*C. & D.*, August, 1898, page 348) considers the requirements of the quantitative test too stringent.

*Caffeine.*—As to the Pharmacopœia statement that “at  $100^\circ\text{C}$ . the crystals lose 8.49 per cent. of their weight” (corresponding to one molecule of water), David Howard (*C. & D.*, April, 1898, page 675) remarks that “he has never known it to lose the last trace of hydration at that temperature.” Tassily (*Brit. and Col. Druggist*, March, 1899, page 249, from *Bull. Soc. Chim.*) states that “hydrated caffeine,  $\text{C}_8\text{H}_{10}\text{N}_4\text{O}_2\cdot\text{H}_2\text{O}$ , does not part with all its copied water, even when heated to  $150^\circ\text{C}$ ., at which temperature caffeine begins to volatilise.” The observation that caffeine loses its water of crystallisation at  $100^\circ\text{C}$ . is attributed to Stoker (Beilstein’s “Handbuch,” Bd. III., page 957), and the writer believes it to be perfectly correct. As commercial caffeine probably never contains 8.49 per cent. of water, owing to the facility with which the crystals effloresce, it would be more correct to state that “at  $100^\circ\text{C}$ ., the crystals lose their water of crystallisation.”

A sample of caffeine, freshly crystallised from water, and dried on bibulous paper, was heated for two hours at  $100^\circ\text{C}$ ., and on subsequently heating for another half-hour the weight was found to remain quite constant, thus indicating that all the water had been expelled. The loss in weight was 7.13 per cent., which corresponds to that found by Allen—namely, 7.05 per cent. and 7.10 per cent. (see Allen’s “Comm. Org. Analysis” vol. iii., part ii., page 475). Allen has thoroughly investigated this subject, and, as he remarks, it is probable that the deficiency is due to efflorescence, for the water of crystallisation is lost even by exposure over sulphuric acid at the ordinary temperature, so that it suffers no further loss of weight at  $100^\circ\text{C}$ . When heated to  $120^\circ\text{C}$ ., caffeine constantly loses weight, owing to slow volatilisation. It is obvious that, with a freshly crystallised substance of this character, it is impossible, when drying it in the air, to determine exactly when it has lost the last trace of adhering moisture, or the point at which it begins to effloresce.

*Caffeine Citrate.*—The text of this article contains an error which also appears in the U.S.P. This is that “with 3 parts of water it forms a clear, syrupy solution,” whereas, in reality, it forms a stiff paste (see also *Proc. Amer. Pharm. Assoc.*, 1897, page 714). If the mixture with 3 parts of water be gently warmed it forms a clear solution, but, on cooling, it again forms an almost solid mass of acicular crystals of caffeine. The Swiss Pharmacopœia states that the compound is “readily soluble in 4 parts of hot water,” which is quite correct. The Pharmacopœia further states: “but more water [that is, more than 3 parts] dissociates the salt, and affords a white precipitate of caffeine which redissolves when excess of water is added.” It would be somewhat strange if the compound should dissolve unchanged, as is implied, in exactly 3 parts of water, and that any further addition of water (how much “more water” is not stated) should dissociate it. It is quite well known, as the simplest experiment will prove, that the compound is dissociated as soon as it is brought in contact with water. From the warm solution caffeine separates as a mass of acicular crystals, and not in a form which might be understood as a “white precipitate.” This is said to “redissolve when excess of water is added,” an expression which is neither well-chosen nor precise.

*Calcium Hypophosphite.*—In the text it is stated: “Heated to redness the crystals ignite, evolving spontaneously inflammable hydrogen phosphide, &c.” A similar statement occurs in the 1885 Pharmacopœia. This sentence seems to present confusion of ideas; the crystals do not ignite, but the gases evolved by their decomposition. A more correct statement of the decomposition is given under Sodium Hypophosphite. There are several points in the text of the hypophosphites, both in the British and the U.S. Pharmacopœias, which are in need of revision, and which have been thoroughly considered in a paper by Dr. H. A. D. Jowett (*C. & D.*, August, 1898, page 300, and *P.J.*, August, 1898, page 171).

*Cerium Oxalate.*—For an investigation of this salt see a paper entitled “The Composition and Determination of Cerium Oxalate,” by F. B. Power and Frank Shelden (not yet officially published, but recently reported in the *C. & D.*).

*Chloral Hydrate.*—E. Merck (*C. & D.*, August, 1898, page 348) has noted that a solidifying-point about  $120^\circ\text{F}$ . ( $48.9^\circ\text{C}$ .) of fused chloral hydrate cannot be guaranteed, and that his own preparation solidifies at  $44^\circ\text{C}$ . The U.S.P. puts the limits between  $35^\circ$  and  $50^\circ\text{C}$ .

*Chloroform.*—The Pharmacopœia states that “on allowing 20 c.c. to evaporate . . . no foreign odour is perceptible at any stage of the evaporation.” The directions for conducting this test are probably not intended to be followed literally, as they would require an amount of chloroform to be inhaled which would be somewhat unpleasant in its effects. The test of the U.S.P. is more practicable, and quite adequate—namely, that when 20 c.c. of chloroform are evaporated as directed “no foreign odour should become perceptible as the last portions disappear from the paper, and the paper should be left nearly odourless when compared with a new odourless filter.”

*Cocaine Hydrochloride.*—The melting-point given in the Pharmacopœia— $356^\circ$  to  $366.8^\circ\text{F}$ . ( $180^\circ$  to  $186^\circ\text{C}$ .)—is too low, and allows too much latitude. There is a superfluity of tests for identity. The permanganate-test, as formulated by the Pharmacopœia, is quite useless, and practically devoid of meaning. It states: “A solution containing not less than 1 per cent. gives, with excess of solution of potassium permanganate, a copious red precipitate, which does not change colour within an hour.” The test to be of any value must be conducted under very definite conditions, and not by observing the colour of the precipitate, but the colour of the liquid. The expression “excess of solution of potassium permanganate,” if used without restriction, would seem to permit the use of any indefinite amount of the latter solution. It is also not apparent how any change of colour in the red precipitate (if it undergoes any change) can be observed in a solution containing an excess of permanganate. It will be found of interest in this connection to compare the very precise, but necessary, conditions for the proper application of this test, as given in the United States, German, and Swiss Pharmacopœias. The melting-point of cocaine is stated by David Howard to be



98° C., and not 96-98°, which would admit dangerous impurities (*C. & D.*, April, 1898, page 675).

**Codeine.**—The following test of the Pharmacopœia for this alkaloid suggests some criticism:—

"A saturated solution of codeine in water acidulated with hydrochloric acid, should give no blue colour, but only gradually a dull green, on the addition of test-solution of ferric chloride and a very dilute solution of potassium ferricyanide (absence of morphine and other impurities)."

As the test reads, a neutral solution of codeine hydrochloride would be used in making this test, which would obviously be quite different in its character from the solution employed if a comma were placed after the word water, so as to read: "A saturated solution of codeine in water, acidulated with hydrochloric acid." Comparative experiments will show that the test is best conducted in the latter form—that is, in slightly acid solution. The statement that this test shows the absence of morphine "and other impurities" is certainly much too broad, and most incorrect, for it will by no means detect all other impurities, as might be inferred, nor even any considerable proportion of possible impurities. Compare, for example, Flickiger's "Reactions" (American edition, page 76). As to the solution of this alkaloid in sulphuric acid, see the notes under the latter, and *Chemiker Zeitung* (*Repertorium*), 1897, pages 80, 107.

**Cotton.**—The Pharmacopœia adopts a chemical test for the identity of cotton which is of considerable interest if not of special pharmaceutical importance. This test is expressed as follows:—"It dissolves in concentrated solution of copper ammonio-sulphate." The U.S.P. of 1890 makes a similar statement, and it also occurs in Maisch's "Organic Materia Medica." This is incorrect, as experiment has shown. "Schweizer's reagent" for cellulose is an ammoniacal solution of cupric oxide, differing in properties from a solution of copper ammonio-sulphate. In Beilstein's "Handbuch," 3rd edit., Bd. I., page 1073, it is simply stated that "cellulose dissolves in ammonio-cupric oxide (kupferoxydammoniak), and that it is precipitated from the solution by acids and salts. A similar statement is found in Tollen's "Handbuch der Kohlenhydrate, Bd. I., page 228; Allen's "Commercial Organic Analysis," vol. i., page 388; and in numerous other works (Cross and Bevan's "Cellulose," 1895, page 13, and Erdmann's "Lehrbuch der anorganischen Chemie," page 688, were quoted).

Pure white cotton was digested for a week in a solution of copper ammonio-sulphate twice the strength of the official solution. It remained quite unchanged, and the liquid, when acidulated, remained perfectly clear, indicating that no cellulose had been dissolved. A solution of ammonio-cupric oxide, prepared by precipitating cupric hydrate in the presence of a little ammonium chloride and dissolving the well-washed precipitate in a 20-per-cent. solution of ammonia, dissolved cotton abundantly and almost immediately. This solution, when acidulated, afforded the characteristic gelatinous precipitate of cellulose.

**Creosote.**—This is such a complex substance, and so variable in composition, that the determination of correct standards for its quality or purity is attended with considerable difficulty. There appears, however to be one error in the text of the Pharmacopœia—namely, the statement that "it rotates the plane of a ray of polarised light to the left." In the Pharmacopœia of 1885 it was stated to rotate polarised light to the right. J. C. Umney (*P.J.*, January, 1900, page 8) remarks that "practically all the beechwood creosote found in commerce is either slightly dextrorotatory or devoid of optical rotation." Allen ("Commercial Organic Analysis," vol. ii. part ii., page 285) says: "As a rule, wood creosote exhibits no sensible optical activity." Five different specimens examined by the writer were found to be perfectly inactive optically. An error occurs in Allen's work, *loc. cit.*, page 277, in the statement that "wood creosote does not coagulate albumin." It was thought of interest to ascertain the characters of some commercial creosotes; specimens were therefore procured, and their physical constants determined. They were designated:—I. Beechwood creosote, first quality. II. Beechwood creosote, second quality. III. Wood-tar creosote, first quality. IV. Wood-tar creosote, second quality. All of the above were obtained from an English manufacturer. V. Pure beechwood creosote. This was an old specimen of French origin:—

|                                                                                              | I.    | II.   | III.  | IV.   | V.                      |
|----------------------------------------------------------------------------------------------|-------|-------|-------|-------|-------------------------|
| Sp. gr. at 15° C. ....                                                                       | 1.089 | 1.089 | 1.079 | 1.058 | 1.085                   |
| Polarisation ....                                                                            | ...   | ...   | ...   | ...   | All optically inactive. |
| Diminution of volume when shaken with 5 volumes of 10-per-cent. NH <sub>3</sub> solution ... | 15%   | 13%   | 5%    | 2.5%  | 4%                      |

On distilling 100 c.c. the following results were obtained, the mercury-bulb being entirely in the vapour of the liquid:—

- I. 190-200° C., 7%; 200-220°, 84.4%; 220-240°, 8%.
- II. 210-220°, 27%; 220-240°, 66%; 240-260°, 5%.
- III. 210-220°, 23%; 220-233°, 75%.
- IV. 230-240°, 49%; 240-260°, 50%.
- V. 190-200°, 2%; 200-220°, 86%; 220-233°, 10%.

The sp. gr. may apparently be safely required to be not below

1.080 at 15° C. The present U.S., German, and Swiss Pharmacopœias state not below 1.070, and the French Codex 1.067. Other characters might be more correctly expressed if required to be optically inactive, or nearly so, and that it should distil, for the most part, between 200° and 220° C. The test with 10-per-cent. ammonia does not appear to be of special value, inasmuch as the purest creosote shows the greatest diminution of volume. The U.S., German, and Swiss Pharmacopœias include a test for propylguaiacol (cœrulignol) and other objectionable impurities by shaking creosote with twice its volume of petroleum-spirit and baryta-water. This test is evidently of some importance. In the specimens examined No. II. gave a blue colour in the petroleum-spirit layer, and with No. IV. the aqueous layer was coloured a deep red; the other samples gave no very marked reaction.

**Iron Arsenate.**—This salt is, fortunately, recognised by but few modern Pharmacopœias. Even those which have adopted it give different methods for its preparation, and as found in commerce the salt appears to be quite variable in composition. The official method of preparation and determination has already been criticised to some extent by Thos. S. Barrie (*C. & D.*, May, 1900, page 884). With regard to the proportions given in the process for its preparation, Mr. Barrie notes that "the amount of sodium arsenate is excessive, and that 20½ oz. is sufficient for the complete precipitation of the iron." If one takes the pains to examine the subject a little more closely, it will, indeed, be found full of perplexity. The Pharmacopœia directs crystallised ferrous sulphate and anhydrous sodium arsenate to be used, and if we assume the reaction to take place between three molecules of the sulphate and two of the arsenate, the 415 grammes of ferrous sulphate would require theoretically 185 grammes of sodium arsenate, instead of 530 grammes, or 20½ oz. would require 9½ oz. of sodium arsenate, instead of 26½ oz., as prescribed. The 1885 Pharmacopœia directed, for the same amount of ferrous sulphate 15½ oz. of anhydrous sodium arsenate. If crystallised sodium arsenate were used, only 310.5 grammes (or 15½ oz.) would be required. The French Codex process is still more inconsistent, and assigns to the salt the composition FeHAsO<sub>4</sub>, but it is not at all probable that a salt of this composition is formed. (Compare Hirsch, "Universal Pharmacopœie," Bd. I., page 672). Mr. Barrie (*loc. cit.*) has further criticised the Pharmacopœia requirement that only the ferrous iron in this salt shall be determined. The writer agrees that the determination of the arsenic acid is of infinitely more importance.

**Saccharated Iron Carbonate.**—The definition of the chemical character of this preparation is not sufficiently precise to be of much utility, and might as well be omitted. Thus "xFeCO<sub>3</sub> and yFe(OH)<sub>2</sub>, more or less oxidised," would also imply xFe<sub>2</sub>O<sub>3</sub>. It, moreover, does not seem quite correct or logical to speak of a "ferrous oxycarbonate, more or less oxidised," and it is also doubtful whether a mixture dried at 100° C. would contain any ferrous hydroxide, Fe(OH)<sub>2</sub>.

**Iron and Quinine Citrate.**—The estimation of the quinine in this salt is much more conveniently accomplished with the use of chloroform than ether.

**Esiccated Ferrous Sulphate.**—The text of this preparation admits of some improvement. Instead of directing that ferrous sulphate should be exposed to heat "until aqueous vapour ceases to be given off," and that "the residue should weigh about 60 per cent. of the original salt," it would be more practical and convenient to prescribe a definite loss of weight, which, in the U.S., German, and Swiss Pharmacopœias, is uniformly fixed at 35-36 per cent. The quantitative test is very awkwardly expressed, inasmuch as it requires the product to contain an amount of iron corresponding to at least 92½ per cent. of FeSO<sub>4</sub>.H<sub>2</sub>O. As the product does not correspond exactly to any salt of this formula, there is no apparent advantage in basing the calculation upon it. If a quantitative test is considered necessary, it would be much more simply expressed by requiring a certain percentage of iron in the ferrous state.

**Reduced Iron.**—The official method for determining the amount of metallic iron in this preparation is not satisfactory, and the details are not quite correctly expressed. A more accurate method is that with the use of mercuric chloride and potassium iodide, as formulated either by the U.S. or German Pharmacopœias (compare E. Merck, *C. & D.*, August, 1898, page 348; also E. S. Peck, *C. & D.*, in his Conference papers of 1898 and 1899). A test for arsenic would also be desirable.

**Tartarated Iron.**—The incineration method for determining the iron in this salt, even with the greatest care in incinerating and washing, leads to loss. It is quite inexplicable why this method should be adopted in preference to the iodometric one, which is so much more simple, expeditious, and accurate, and which, as formulated by the United States and German Pharmacopœias, is applicable for the determination of iron in all the so-called scale salts, as also in the official solutions of iron. The percentage of iron in tartarated iron and in the iron and ammonium citrate was determined by the iodometric method, and with the latter salt also by the method of ignition, samples of each being obtained from three of the leading London manufacturers, who may be designated respectively as A, B, and C. The iodometr



estimations were conducted as described in the U.S.P. Two determinations were made of each salt, and the mean of the closely agreeing results taken:—

**Tartarated Iron.**—A contained 19.95% Fe = 28.50%  $\text{Fe}_2\text{O}_3$ ; contained 18.93% Fe = 27.04%  $\text{Fe}_2\text{O}_3$ ; C contained 17.10% Fe = 24.43%  $\text{Fe}_2\text{O}_3$ . The Pharmacopoeia requires the salt to yield, by the method of ignition, not less than 30 per cent. of ferric oxide.

**Iron and Ammonium Citrate.**—

|                         | By Iodometric Method.              | By Ignition.                       |
|-------------------------|------------------------------------|------------------------------------|
| contained 20.76% Fe ... | 29.66% $\text{Fe}_2\text{O}_3$ ... | 30.75% $\text{Fe}_2\text{O}_3$ ... |
| contained 30.42% Fe ... | 29.17% $\text{Fe}_2\text{O}_3$ ... | 32.56% $\text{Fe}_2\text{O}_3$ ... |
| contained 20.80% Fe ... | 29.70% $\text{Fe}_2\text{O}_3$ ... | 31.86% $\text{Fe}_2\text{O}_3$ ... |

The Pharmacopoeia requires this salt to yield, by the method of ignition, 31 or 32 per cent. of ferric oxide, and the three specimens may be considered to meet this requirement; but the iodometric method, which gives somewhat lower results, undoubtedly indicates more correctly the actual percentages of iron contained in the salts. The difference in the results may be partly attributed to the presence of alkali, for the residues of ferric oxide from all the samples of this salt were alkaline to litmus, and the salt B, which afforded the highest percentage of ferric oxide, was also the most strongly alkaline.

**Hyoscyne Hydrobromide, and Hyoscyamine Sulphate.**—Compare notes under Atropine.

**Lithium Carbonate.**—From the figures given in the text for this salt it is assumed that when dried at 100° C. it loses three molecules of water, and at 115.5° C. an additional molecule, the salt thus dried being then required to yield on ignition a residue corresponding to 98.5 per cent. of the pure carbonate. These requirements are not quite correct, and in practice cannot be met. In the first place, there is no indication of the length of time at which the salt should be dried at the specified temperatures, and at 100° C. a constant weight cannot be obtained. In the second place, all the water is not expelled at 115° C. (a statement also occurring in the French Codex), and a temperature of about 100° C. seems to be necessary. A more satisfactory method of determining the percentage of pure lithium carbonate in the salt is by its conversion into sulphate. (Compare L. F. Kebler, *Amer. Pharm.*, 1899, page 137; also E. Merck, *C. & D.*, August, 1898, page 348). The French Codex contains some peculiar errors in the text for this salt—as, for example, the statement (originating with Dorvault) that it is soluble in 25 parts of water. It so states that 1 gramme of the salt, when calcined with an excess of sulphuric acid, leaves 0.225 gramme of lithium sulphate, whereas the calculated amount of the latter is 0.585 gramme.

**Magnesium Carbonate.**—The same criticisms would apply to the formula for this salt as to those given for bismuth subcarbonate and bismuth subnitrate. It is of somewhat variable composition, and therefore cannot be represented by a definite formula such as assigned to it by the Pharmacopoeia, which nearly corresponds to that of the French Codex.

**Menthol.**—Messrs. Schimmel & Co. (*Semi-annual Report*, October, 1898, page 63) have commented upon the Pharmacopoeia description of this substance as being “in crystals usually more or less moist from adhering oil,” and have noted that recognition thus given to an impure article. The colour-reaction—stated to be obtained when menthol is “boiled with sulphuric acid diluted with half its volume of water” is of exceedingly doubtful value.

**Morphine Hydrochloride.**—This salt is described as forming acicular prisms, or a white powder consisting of minute cubical crystals. A similar description is given in the United States and Swiss Pharmacopoeias, but it appears very doubtful whether the white-powder form of the salt consists of minute cubical crystals. The German Pharmacopoeia describes it as occurring “in white needle-shaped crystals, or white cubical pieces (*Stücke*) of a micro-crystalline character.” Beilstein (*Handbuch*, Bd. III., page 898), referring to Hesse, states that by slow crystallisation from alcohol the anhydrous salt is obtained in the form of short, unisided rhombic prisms; and Guareschi (*Die Alkaloide*, page 371) gives a similar description, together with that of the German Pharmacopoeia. The salt would evidently be more correctly described as “in acicular crystals,” or a white micro-crystalline powder. Possibly, the error in the B.P. arises from the fact that certain manufacturers have brought morphine salts to commerce in the form of small artificially-formed cubes. Compare also E. Merck (*C. & D.*, August, 1898, page 348).

**Expressed Oil of Almonds.**—J. C. Umney (*P.J.*, July, 1899, page 106, and January, 1900, page 8) considers the test with fuming nitric acid to be incapable of detecting the presence of peach-kernel oil, but useful for detecting apricot-kernel oil. The U.S.P. (1890) had adopted this test for the detection of peach-kernel oil, and the Swiss Pharmacopoeia gives it as a specific test for the latter (*Pfirsichkernöl*), as also for rape-seed oil (*Rapsöl*). Mr. Umney's observations are of special interest, as the tests were made with pure oils of peach-kernels and apricot-kernels, obtained both by expression and by extraction with ether. There is, however, an explanation which may serve to clear up this apparent discrepancy. According to Hirsch

(“Commentar zum Arzneibuch für das Deutsche Reich,” page 483), under the name of “Pfirsichkernen” (the only English equivalent for which is peach-kernels), which are used in making the so-called oleum amygdalarum gallicum, are not to be understood the kernels of the common peach (*Prunus persica*, Jess., *Amygdalus persica*, Linne, or *Persica vulgaris*, Mill), but a small sort of the bitter almond, a variety of *Amygdalus communis*, Linne. This oil undoubtedly affords the reaction described in the Pharmacopoeias.

**Oil of Cloves.**—A useful criterion for the purity of this oil, which might be considered by the Pharmacopoeia, is its property of forming a clear solution with twice its volume of 70-per-cent. alcohol.

**Oil of Cinnamon.**—For determining the percentage of cinnamic aldehyde or of non-aldehyde constituents in this oil the Pharmacopoeia directs that “if 10 c.c. be well shaken with 50 c.c. of a boiling 30-per-cent. solution of sodium hydrogen sulphite, an oily layer separates, which, when cooled to 60° F., should not measure more than 5 c.c.” These directions are quite inadequate, and in many cases would lead to very incorrect results, if not to complete failure. It would obviously be a very difficult matter to shake the oil with a boiling solution of sodium hydrogen sulphite, and it is not desirable to add the entire amount of the latter solution at once, but in small portions, the flask being heated on a water-bath after each successive addition of the solution until the solid bisulphite compound has become completely liquefied. A proper description of the method of conducting this determination is given by Gildemeister and Hoffmann in “*Die aetherischen Oele*” (Berlin, 1889, page 505). The oil forms a clear solution with three times its volume of 70-per-cent. alcohol, and this is a test of some value.

**Oil of Copaiba.**—In the *P. J.*, January, 1900, page 54, F. W. Short criticises the statement of the Pharmacopoeia that this oil “should rotate a ray of polarised light from 28° to 34° to the left.” This statement occurs under Copaiba, but in the text of the oil the factors of rotation are not mentioned. As Mr. Short has pointed out, they are misleading, for the limits of rotation should be much broader. A specific test for gurjun oil might be adopted (see *Amer. Jour. Pharm.*, 1897, page 579), although this would also be indicated by a higher sp. gr. and a higher optical rotation.

**Castor Oil.**—The Pharmacopoeia has adopted a test with sulphuric acid for the detection of foreign oils, which is essentially the same as that given in the U.S. and German Pharmacopoeias, but by introducing the slight verbal change of requiring that “the mixture should not become brown,” instead of blackish-brown, the character of the test has been rendered inaccurate. See also *P.J.*, January, 1900, page 8, and E. Dowdard, *C. & D.*, May, 1899, page 814).

**Physostigmine Sulphate.**—This salt might with advantage be replaced by the salicylate, which is much more stable, and therefore more largely used. The Pharmacopoeia indicates the sulphate to contain an indefinite amount of water of crystallisation, expressed as “ $x\text{H}_2\text{O}$ ,” but Guareschi (“*Die Alkaloide*,” page 495) regards it as anhydrous.

**Pilocarpine Nitrate.**—The Pharmacopoeia has wisely adopted this salt of pilocarpine in preference to the hydrochloride, which is somewhat deliquescent. The text, however, is very imperfect (compare papers on this subject by Dr. H. A. D. Jowett, *C. & D.*, July, 1899, page 203; *P.J.*, July, 1899, page 91; and *Journ. Chem. Soc.*, 1900, page 473). Subsequent observations suggest a slight modification of two of the factors given for this salt in the mentioned paper, in order that they may meet practical requirements. The melting-point should be not below 173° C., and the specific rotation not lower than +80°. The formation of a crystalline picrate, which melts quite sharply at 147° C., is also a useful criterion for the purity of this salt.

**Potassium Tartrate.**—The formula given for this salt is incorrect. It should be  $(\text{K}_2\text{C}_4\text{H}_4\text{O}_6)_2 \cdot \text{H}_2\text{O}$ , and the official requirement of the volumetric test is based upon the latter formula. If the salt had the formula  $\text{K}_2\text{C}_4\text{H}_4\text{O}_6 \cdot \text{H}_2\text{O}$ , 1 gramme of it, after ignition, would require about 8.2 c.c. of normal sulphuric acid for neutralisation instead of 8.4 c.c., or more correctly 8.5 c.c. The error has probably arisen through the attempt to express the composition of the salt by a constitutional formula (see also *P.J.*, September, 1899, page 284).

**Acid Quinine Hydrochloride.**—E. Merck (*C. & D.*, August, 1898, page 349) has noted that it is practically impossible to titrate this salt with normal alkali; the results with litmus as an indicator being too low, and with phenolphthalein or methyl orange excessively high.

**Quinine Sulphate.**—Some interesting observations and criticisms relating to the official test for this salt are noted by A. J. Cownley and by David Howard (*P.J.*, vol. ix., 1898, pages 412, 447, 472).

**Sodium Arsenate.**—Thomas S. Barrie (*C. & D.*, May, 1900, page 884) has justly criticised the official method for the quantitative determination of the purity of this salt by means of lead acetate. It is quite certain that no careful analyst would think of employing this method. The figures given for the test appear to be wrong (see also *P.J.*, September, 1899, pages 324, 355).

**Sodium Hypophosphite.**—See under Calcium Hypophosphite.



**Solution of Lead Subacetate.**—The writer has found that 1 gramme of this solution (sp. gr. 1.277), when freshly prepared, requires 19 c.c. of decinormal sulphuric acid for complete precipitation. The lower figure, 17 c.c., given by the Pharmacopœia would allow for the change which this solution rapidly undergoes. In titrating it is an advantage to dilute the solution with water, and use methyl orange as an indicator.

**Sulphur.**—It is somewhat surprising that the Pharmacopœia should make the requirement that sublimed sulphur "should not have any action upon litmus," and that "solution of ammonia, agitated with it, and filtered, does not on evaporation leave any residue." It is quite well known, as has been noted by E. Merck (*C. & D.*, August, 1898, page 349), that neither of these requirements can be met. For this reason most of the modern Pharmacopœias have adopted as a special preparation for medicinal use a purified sulphur, from which the free acid and arsenious sulphide or arsenious acid have been removed by digesting sublimed sulphur with dilute ammonia, and washing with water.

**Terebene.**—Besides the British, this preparation is only recognised by the U.S. and Russian Pharmacopœias. Although of complex composition, and therefore somewhat variable in character, it admits of somewhat more precise and accurate description than is given by the Pharmacopœia. A chemical study of its constituents was made a few years ago by Power and Kleber (*Pharm. Rundschau*, New York, 1894, pp. 16-19), who proposed that terebene should be defined as "consisting for the most part of the hydrocarbons dipentene and terpinene, with some cymol and camphene." The preparation employed in that research represented a product that had been carefully prepared on a large scale. It was optically inactive, had a sp. gr. of 0.855 at 15° C., and distilled chiefly between 170° and 185° C.

Three specimens of terebene have recently been obtained from leading London manufacturers and examined, with the following result:—

|                                         | A          | B          | C          |
|-----------------------------------------|------------|------------|------------|
| Sp. gr. at 15° C. ... ..                | 0.863      | 0.862      | 0.865      |
| Optical rotation in 100-mm. tube ... .. | −0° 15'    | −0° 30'    | Inactive   |
| Fractional distillation of 100 c.c.:—   |            |            |            |
| −165° C. ... ..                         | 1.0 c.c.   | —          | 1.5 c.c.   |
| 165–170° C. ... ..                      | 4.0 c.c.   | 1.6 c.c.   | 15.5 c.c.  |
| 170–175° C. ... ..                      | 24.4 c.c.  | 38.0 c.c.  | 44.5 c.c.  |
| 175–180° C. ... ..                      | 38.0 c.c.  | 33.2 c.c.  | 24.0 c.c.  |
| 180–190° C. ... ..                      | 27.0 c.c.  | 21.2 c.c.  | 8.5 c.c.   |
| Residue ... ..                          | 5.6 c.c.   | 6.0 c.c.   | 6.0 c.c.   |
|                                         | 100.0 c.c. | 100.0 c.c. | 100.0 c.c. |

It will be observed that the sp. grs. of all the samples are in close accordance with the official requirements. The lower sp. gr. referred to (0.855), as observed by the writer, may be attributable to the use of a more freshly distilled oil of turpentine, although the sp. gr. of terebene itself will also increase by age. The statements of the Pharmacopœia that "it should distil between 156° and 180° C.," and that "not more than 15 per cent. should distil below 165° C.," obviously require modification. It could not distil at the lower temperature unless it contained unaltered pinene, which would not be the case in a carefully-prepared article, and which would also be indicated by its optical activity. It might properly be required to distil chiefly between 170° and 185°, or possibly 190° C. To permit as much as 15 per cent. to distil below 165° C. would admit a very inferior preparation. It has been noted by several manufacturers (*Year-book of Pharmacy*, 1899, page 396, and *C. & D.*, July 29, 1899, page 209; *P.J.*, July, 1899, page 104, and January, 1900, page 8) that a terebene made from American oil of turpentine may be slightly levorotatory—as is, indeed, the case in two of the specimens examined—or that, when originally inactive, it may acquire optical activity on keeping. Dr. J. H. Long (*Journ. Amer. Chem. Soc.*, 1894, page 844) has observed that American oil of turpentine sometimes has a very low positive rotation, or may even be levorotatory, when containing the product distilled from the so-called spruce-trees. The very slight levogyrate rotation occasionally observed in terebene may be due to this fact, or possibly to the formation of a little levogyrate limonene.

**Veratrine.**—It would be interesting to know why an official process has been considered necessary for this substance, which is apparently one of the last things that a pharmacist would undertake to manufacture.

In the preceding observations the writer has not attempted to consider the text of all the chemicals of the Pharmacopœia, but has necessarily restricted his comments to such statements as have from time to time been more prominently

brought to his notice by a perusal of the work. Such an inspection, however, appears to indicate that the errors are somewhat more numerous than one might reasonably expect in a work of a national and authoritative character, and it is evident that some of these errors might have been avoided, either by reference to standard chemical works, to current chemical literature, or by simple experiments.

There are naturally, also, some features of every Pharmacopœia of a more general character, which, quite apart from any actual inaccuracies, may properly form the subject of individual comment, such as its scope or limitations, the arrangement of the text, character of the text, &c., and a brief reference may be made to some of these.

1. In the first place, as the Pharmacopœia has wisely omitted details of processes for nearly all the chemicals, which are now made almost exclusively and much more economically on a large scale, it might with advantage have gone a step further, and, in conformity with most of the modern Pharmacopœias, have omitted such information as it gives with respect to the methods by which the official chemicals are obtained. It does not seem probable that from any point of view the very brief and often imperfect information given can serve any useful purpose, as it may be found either in text-books on chemistry or in greater detail in works on chemical technology. If a few examples be taken at random from the long list, one may consider the official description of the methods for obtaining lead iodide, mercuric iodide, or sodium arsenate, which is totally inadequate for any practical purpose, for it is quite important in the preparation of these chemicals—as, indeed, in most others—that definite proportions of the combining substances be employed, independent of motives of economy. In the case of sodium sulphocarbolate it is stated that "it may be obtained by dissolving phenol in excess of sulphuric acid, and converting the phenolsulphonic acid so obtained into a sodium salt." The required para-phenolsulphonic acid may not be obtained by simply dissolving phenol in sulphuric acid; and, besides, what is to be understood by an excess of the latter, and how is it to be removed? The statement under the corresponding zinc salt is more nearly correct, as it is said, "It may be obtained by heating a mixture of phenol and sulphuric acid, &c." Here, also, the temperature at which the mixture is heated is of some importance. The formula of the zinc salt is wrong, as it contains eight molecules of water. The information given regarding the production of sulphur, sodium carbonate and bicarbonate, mercuric and mercurous chloride, potassium nitrate, and innumerable other salts can hardly be considered of particular value to any of those who require to make use of the Pharmacopœia who may be assumed to possess a knowledge of these elementary facts. From an explanation given in the preface, however, it would appear that this feature of the work is obligatory, since it contains (page xiii) the following statement: "The paragraphs in former editions which were more or less descriptive of the sources or modes of preparations of official chemical substances have been abbreviated, as far as the requirements of the Medical Act of 1858 will permit."

2. There does not seem to be perfect uniformity in expressing the formulas of the official chemicals, as may be observed, for example, in the formulas for tartarated antimony and sodium potassium tartrate, or potassium acetate and lead acetate. Among the reagents, methyl orange and phenolphthalein, which are only used as indicators, are given constitutional formulas, or, in the case of the latter, named, a complete structural formula. In the preface (page xiv) it is stated that "extended structural or graphical formulas, which would often occupy the space of several lines of print, have, as a rule, been excluded," but it is quite clear why it should have been considered necessary in this single instance. For all the purposes of a Pharmacopœia the simplest empirical formulas would doubtless be quite sufficient, but in connection with these it would be useful to state the respective molecular weights.

3. In the text of the various chemicals we meet with statements as the following one under Lithium Citrate: "It yields the reactions characteristic of lithium and of citrate or under Lead Oxide: "It gives the reactions of lead." Facts of this character would be so self-evident to any one that it hardly seems necessary to note them, unless special tests for identity are given. Throughout the work



expression "characteristic reaction" occurs, as under Lead Oxide: "It should yield no characteristic reaction with the tests for copper, iron, or carbonates." The word "characteristic" would appear to be superfluous, for it would certainly be understood that a reaction employed in testing for these substances would be one characteristic of them.

4. The plan adopted for stating the tests for purity, or rather the substances to be tested for, may appear to possess the merit of simplicity, but it is a question whether it will not fail in its purpose and tend rather to discourage the testing of chemicals by those who are not, through more or less constant practice, kept conversant with analytical methods. Some of the lists of tests would require the substance to be taken pretty well through the ordinary analytical chart, involving the separation of several groups of elements and several hours' work, and even then it is likely that some impurity might be overlooked if no special instructions are given. A good example of this is afforded by the text for bismuth carbonate, where it is stated:—

These bismuth salts, when suitably treated, should yield no characteristic reaction with the tests for silver, lead, copper, arsenium, iron, zinc, calcium, magnesium, chlorides, or sulphates, nor with the tests for selenium and tellurium.

It may be safely asserted that a tolerably good analyst would require to give considerable thought to such a problem before deciding upon tests which would positively confirm the absence of all the above-mentioned elements without involving their actual separation from each other. The facility with which these tests may be conducted depends very largely in this case upon the simple but somewhat ambiguous phrase "when suitably treated." Another example is afforded by the text of cerium oxalate, where it is stated that it should yield no characteristic reaction for various substances including calcium. On referring to the list of tests given in the Appendix, there will be found under Calcium two positive tests—namely, that "solution of ammonium carbonate yields a white precipitate," &c., and that "solution of ammonium oxalate gives a white precipitate," &c., also as a negative test that "solution of potassium chromate gives no precipitate"; but none of these tests is applicable for the direct detection of calcium in cerium oxalate. An apparent justification of the plan adopted by the Pharmacopœia with respect to the omission of specific tests for the detection of impurities in chemicals is afforded by the following explanatory statement in the preface (page xiv):—"Nor are manipulative details set forth at length, either as regards the preparation of a substance for testing, or as regards the solution or application of the tests, the pharmacist being assumed to possess full knowledge on these and all similar points." If it be assumed that the pharmacist possesses such full knowledge on these important points, it certainly does not seem quite consistent that it should be considered necessary to explain how all the chemical preparations of the Pharmacopœia are obtained.

5. In some cases, however, specific tests are given in the Pharmacopœia—as, for example, the test for thiocyanates in potassium bromide. The necessity for such exceptions to the general rule is not obvious, for anyone capable of conducting the tests for the other substances mentioned—lead, copper, arsenium, iron, aluminium, zinc, calcium, magnesium, sodium, ammonium, bromates, iodates, cyanides, &c.—would in all probability also be familiar with the simple test for thiocyanates, or could at least refer to it in some chemical work. Under Potassium Carbonate it is stated that "it should yield only the slightest reactions with the tests for iron," and "no strongly-marked reactions with the tests for chlorides." It is difficult to surmise what difference in the intensity of the reactions is intended to be permitted in these two differently worded tests. Neither form of expression is sufficiently precise, for no definite standard of purity can be maintained or required when it is left entirely to individual judgment to decide as to what may constitute a strongly-marked or a slight reaction. In some cases the Pharmacopœia appears to have gone to the opposite extreme in being unduly exacting in its requirements—as, for example, under Sodium, where it is stated that "each gramme very cautiously added to water affords a solution which should require for neutralisation at least 42.6 c.c. of the volumetric solution of sulphuric acid." The purity of commercial metallic sodium is such that there would seem

to be no practical necessity for a quantitative test of this character.

6. The question may be suggested whether it would not be an advantage to those using the Pharmacopœia if the impurities to be tested for were rendered more prominent by placing them in italics, rather than the names of the reagents used for their detection or as tests for identity.

7. *Articles Employed in Chemical Testing.*—In this list a method is given for preparing barium hydroxide, which is as easily available an article of commerce as the barium chloride which precedes it. One reagent occurs twice in the list as "calcium oxide, the lime of the British Pharmacopœia," and as "lime, the lime of the British Pharmacopœia." Considerable space might be saved by the omission of the frequently repeated words "of the British Pharmacopœia," and the desired purpose would be just as well accomplished if a simple statement were made at the head of the chapter that such articles as are employed in chemical testing, when represented in the Pharmacopœia, or unless otherwise indicated, should respond to its tests for purity. Even under Water the specific requirement is made that it shall be "the distilled water of the British Pharmacopœia." The requirement that the test-solution of ferric chloride should be made from anhydrous ferric chloride has been commented on under Acetanilide. Nessler's reagent has been brought as a synonym under the title Solution of Potassio-mercuric Iodide, and is referred to under that title in the tests for distilled water. The latter designation, however, is commonly understood to apply to the so-called Mayer's reagent. The more correct title of the official solution would be "alkaline solution of potassio-mercuric iodide." Under the reagent Sodium Thio-sulphate, page 402, it is required that "2.4644 grammes should decolorise 100 c.c. of the volumetric solution of iodine." The use of this amount of substance would involve a quite unnecessary waste of iodine solution, as equally accurate results may be obtained with one-fourth the quantities specified. It is in marked contrast to the requirement, for example, under Sodium Potassium Tartrate, that "each gramme, heated, &c., should require for exact neutralisation at least 7 c.c. of the volumetric solution of sulphuric acid. In the preface, however, there is also a paragraph (pages xiv, xv) which may be considered to explain, although not altogether satisfactorily, this apparent lack of consistency, since it states:

In quantitative testing the specified amounts of solid or liquid substances are interded only as proportions indicating official standards of purity. . . . In short, the procedure in these and other chemical operations is now left to the skill and judgment of workers, who are assumed to be duly trained.

In this case it would be much simpler to indicate only the percentage of purity required, without any details whatever; but if quantities such as 2.4644 grammes and 100 c.c. are specified, there is no reason why they should not represent such as may be more conveniently and more judiciously employed.

In concluding these somewhat extended observations the writer expresses his thanks to Mr. Frank Shedden, B.Sc., A.I.C., of the Welcome laboratory staff, who has assisted him in some of the experimental work connected therewith, and at the same time to entertain the hope that some, at least, of the recorded notes and comments may prove useful to those upon whom the preparation of a subsequent edition of the British Pharmacopœia may devolve.

### Some Pharmaceutical Tinctures.

By J. C. McWALTER, M.P.S.I., D.P.H., L.R.C.S., &c.

TO THE CHEMIST AND DRUGGIST of June 9, page 959, the author communicated a note on this subject, in which sp. grs. of B.P. tinctures were given in response to a request by the Secretary of the Pharmaceutical Society of Ireland. He now said that the inaccuracies which are liable to creep into such an apparently simple matter as diluting a given alcohol and making a tincture are simply startling when the operation is performed by the mere retailer or his assistants. Some of the figures which he communicated to the *C. & D.* he has found it necessary to "reform" altogether. Those given now cannot claim anything like the respect due

to those of Messrs. Fletcher, Umney, Southall, Gadd, Farr and Wright, &c., but they may serve some useful purpose as indicating what latitude must be allowed to the pharmacist whose desire to follow the pharmacopœtal instructions is not always equal to his ability. The weights of residues are new:—

|                           | Sp. gr. | Weight of residue, gr. per oz. |
|---------------------------|---------|--------------------------------|
| Tinct. Aconiti ... ..     | 0.893   | 4                              |
| " Aloes ... ..            | 0.965   | 20                             |
| " Arnica ... ..           | 0.891   | 2                              |
| " Asafetide ... ..        | 0.906   | 28½                            |
| " Aurantii ... ..         | 0.880   | 17½                            |
| " Belladonna ... ..       | 0.916   | 9                              |
| " Benzoin. Co. ... ..     | 0.885   | 59                             |
| " Buchu ... ..            | 0.927   | 10                             |
| " Calumbæ ... ..          | 0.920   | 6                              |
| " Camph. Co. ... ..       | 0.922   | 1½                             |
| " Cannabis Indica ... ..  | 0.845   | 16                             |
| " Cantharidis ... ..      | 0.835   | 2                              |
| " Capsici ... ..          | 0.899   | 6                              |
| " Card. Co. ... ..        | 0.949   | 28                             |
| " Cascarella ... ..       | 0.901   | 6½                             |
| " Catechu ... ..          | 0.973   | 55                             |
| " Chirata ... ..          | 0.926   | 4½                             |
| " Cimicifuge ... ..       | 0.919   | 6                              |
| " Cinchona ... ..         | 0.913   | 24                             |
| " Cinchona Co. ... ..     | 0.916   | 22                             |
| " Cinnamomi ... ..        | 0.909   | 8                              |
| " Cocci ... ..            | 0.948   | 16                             |
| " Colchici Sem. ... ..    | 0.958   | 18                             |
| " Conii ... ..            | 0.895   | 7                              |
| " Croci ... ..            | 0.929   | 8                              |
| " Cubebæ ... ..           | 0.845   | 8                              |
| " Digitalis ... ..        | 0.926   | 16                             |
| " Ergot. Ammon. ... ..    | 0.932   | 9½                             |
| " Ferri Perchlor. ... ..  | 1.087   | 80                             |
| " Gelsemii ... ..         | 0.916   | 4                              |
| " Gent. Co. ... ..        | 0.964   | 22                             |
| " Guaiaci Ammon. ... ..   | 0.894   | 62                             |
| " Hamamelidis ... ..      | 0.952   | 10                             |
| " Hydrastis ... ..        | 0.928   | 7                              |
| " Hyoscyami ... ..        | 0.951   | 9                              |
| " Iodi ... ..             | 0.835   | —                              |
| " Jaborandi ... ..        | 0.955   | 16                             |
| " Jalape ... ..           | 0.917   | 32                             |
| " Krameria ... ..         | 0.936   | 18                             |
| " Kino ... ..             | 1.025   | 56                             |
| " Lavand. Co. ... ..      | 0.844   | 2                              |
| " Lupuli ... ..           | 0.941   | 24                             |
| " Myrrha ... ..           | 0.850   | 12                             |
| " Nucis Vom. ... ..       | 0.855   | 8                              |
| " Opii ... ..             | 0.950   | 16                             |
| " Podophylli ... ..       | 0.851   | 15                             |
| " Pruni Virg. ... ..      | 0.937   | 14                             |
| " Pyrethri ... ..         | 0.899   | 12                             |
| " Quassia ... ..          | 0.956   | 5½                             |
| " Quillaia ... ..         | 0.915   | 6                              |
| " Quinine ... ..          | 0.883   | 16                             |
| " Rhei Co. ... ..         | 0.954   | 46                             |
| " Scilla ... ..           | 0.965   | 45                             |
| " Senega ... ..           | 0.933   | 20                             |
| " Senna Co. ... ..        | 0.981   | 54                             |
| " Serpentina ... ..       | 0.918   | 6                              |
| " Stramonii ... ..        | 0.956   | 22                             |
| " Strophanthi ... ..      | 0.888   | 2                              |
| " Sumbul ... ..           | 0.898   | 12                             |
| " Tolutana ... ..         | 0.874   | 34                             |
| " Valerian. Ammon. ... .. | 0.937   | 24                             |
| " Zingiberis ... ..       | 0.855   | 7                              |

The weight of the residue shows much greater variation than the sp. gr., whilst 0.010 would cover the differences seen in most of the tinctures of which the results have been published, the variation of the weight of residue differs by as much as 50 per cent. If, therefore, the compilers of the next B.P. intend to publish standards for residues they will need to allow a very great limit—so much so as to be of little use. If this paper should prove of any use the credit is mostly due to the author's assistants—Miss L. Smyth and Mr. P. T. Cosgrave, who have worked very assiduously at the subject

## Almond Oil and its Substitutes.

By W. C. ALLEN and E. T. BREWIS, F.I.C.

In speaking of almond oil we have to remember at the outset that almonds are produced in many countries, and although most of those that reach our market are shipped



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from a zone falling between the 30th and 45th parallels of N. latitude, which might be broadly described as "Southern Europe and countries adjacent," we have within that limit to deal with fruit produced under varying conditions both of climate and soil. This is evident when we glance at the different countries from which we get our principal supplies—viz.: Morocco, Canary Islands, Portugal, Spain, France, Italy, Sicily, Syria, and Persia. Möller, in his "Lehrbuch der Pharmacognosie," states that approximately almonds contain 50 per cent. of fatty oil, but the estimate of Schaedler (45 per cent. from sweet and 38 per cent. from bitter) is more in accordance with experience.

"Almond oil" of commerce is almost entirely obtained by the expression of bitter almonds in powerful hydraulic presses. The expressed oils from "sweets" and "bitters" do not differ from each other in any material degree (compare Valencia sweets and Sicily bitters), whilst the additional product—essential oil of almonds—obtained by distillation of the "press-cake" from the latter enables the manufacturer to supply almond oil at a price that would not be possible were really "sweet almonds" alone used. We say advisedly "really" sweet almonds because at the present time many so-called sweet almonds are being used by manufacturers which would prove very disappointing to anyone seeking a few minutes' pleasant and contemplative recreation by masticating them.

Morocco, or "Barbary," bitter almonds are always more or less mixed with sweets, and it appears to be largely a question of the paint-brush, which can readily produce an "S" or "B" according to the state of the market. The exports from the more northerly ports—viz., Safi, Mazagan, and occasionally Rhabat—appear less open to this objection, though a slight admixture is usually met with. The supplies from Sicily are not only of larger growth, but are prepared for the market in a superior manner, being cleaner and more thoroughly sorted into their respective classes "sweet" and "bitter." Thus here, again, we must note a difference even in bitter almonds, and whilst our suggested masticator would find even the ordinary Mogador "sweet" almonds bitter, if, on the other hand, he had got hold of true Sicilian bitters, his language might not bear a "qualitative analysis." The important production of the Canary Islands holds a somewhat intermediate place between that of Morocco and Sicily, whilst French, Syrian, and Persian practically resemble the Sicilian almonds as regards the quality of the oil they produce. In view, therefore, of these differing sources of supply, we cannot expect absolute uniformity in results upon the examination of the various oils, especially by colour-reactions; fortunately, these differences are but slight, and in no case do they reach a limit that would cause difficulty in distinguishing a genuine almond oil from one containing any of the ordinary adulterants.

The differences in the requirements of the British Pharmacopœia and those of the United States and Germany are slight. The American suggestion of a possibly "colourless" oil appears to foreshadow a state of perfection hardly to be



anticipated here below, if we are speaking of the commercial product. The colour is readily affected by prolonged exposure to light and the oil can, of course, be bleached by artificial means; concurrently with these conditions it suffers greatly in flavour.

The Brit. Pharm. 1898 states that almond oil does not congeal until nearly  $-20^{\circ}\text{C}$ . The German merely says that "it remains clear at  $-10^{\circ}\text{C}$ ." whilst the U.S.P. with its usual thoroughness combines the two statements. The lower limit appears to be reasonable, and conforms to our experience. All three authorities unite in giving the nitric-acid test, while the German and the United States stipulate in addition a test dependent upon the melting-point and solubility of the free fatty acids.

This nitric-acid test has replaced that given by Bieber (*Analyst*, 1884, page 83), who was the first, we believe, to draw attention to the means of discriminating between almond and the so-called "peach-kernel" oil. We owe much to his investigations, which brought to the knowledge of the trade how extensively the cheaper oil was being sold as "almond oil" or used to make the true "oleum amygdalæ dulc." become like the product of "the widow's cruse." Although his reagent is now apt to be considered obsolete, in favour of the nitric-acid test—and rightly so, we think, it is interesting to note that when comparative tests are made by the two methods, on a series of oils, some of the differing characteristics of individual samples are brought out more clearly by the Bieber test; and this is more especially noticeable after the lapse of some hours. We may, however, add that we find that the proportions 1 to 4 rather than 1 to 5 present advantages in actual working.

Maben's results (*P.J.*, 1885. (3) xvi., page 797), using nitric acid sp. gr. 1.42, differ from those of other observers, and have repeatedly been quoted by authors who seem to have overlooked his explanation in a later number of the journal (*P.J.*, 1886 (3), xvi., page 976) that the oils upon which he experimented were not those usually met with in English commerce.

Later Micko (*Analyst*, 1893 page 149) pointed out that the peach-blossoms' colour ascribed by Bieber to peach-kernel oil was really due to the oil from apricot-kernels. No reference to the chemical reactions of almond and kernel oils would be complete without mention of the helpful researches of Mr. J. C. Umney, who has done so much in aid of scientific production in British manufacturing pharmacy.

Since light has been thrown upon this question, we believe that adulteration of almond oil is comparatively rare. It is substitution rather than adulteration that is the practical question of the day. At the present time this question has become acute; the damage done to growing crops of almonds

by the unseasonable frosts in the spring of last year and this has brought about a phenomenal advance in the cost of the fruit, which has in turn affected the price of the oil. The temptation to substitution is therefore considerable. Of such substitutes, peach or apricot kernel oils stand foremost, and, indeed, are the only ones that need serious discussion. For all practical purposes oils from peach-kernels and from apricot-kernels are interchangeable. Shipments, although now consisting chiefly of apricot-kernels containing occasional packages of peach, in the past have been known to the trade as "peach-kernels," and it was this that originally guided us to use what then appeared to be the correct title for the product "oleum amygdalæ persicæ," from *Amygdalus persica*, the peach, and not, as some of our friends have freely translated it, "Persian almond oil." This oil, now so largely produced at home under its distinctive name, yet constantly described from abroad as "almond oil," has a good deal of resemblance to its illustrious namesake. It is slightly more limpid, and possesses a more nutty flavour than the true almond oil, the rich, bland, soft taste of which can be recognised by an expert.

These kernel oils have not the same keeping-quality as the oil for which they are substituted, and this, together with their greater limpidity, have been the cause of various troubles where they have been unwittingly used in place of almond oil. The red colour-reaction of apricot, as compared with the yellowish-white of almond, is characteristic, and sharply marks a distinction between the two.

In recent years we have met with many cases of undoubted adulteration, and within the last twelve months have noticed this to a very marked extent. Out of at least seven representative samples of foreign oils obtained from different parts of the country one only could be recognised as an unsophisticated kernel oil. The principal adulterants to be looked for are oils of cotton-seed, sesame, poppy, olive, and arachis. But this is a branch of the subject with which we have no practical experience, and about which we have found some difficulty in obtaining reliable information. We have, however, seen certain specimens which had nothing in common with "almond oil," whose name they bore, or of the kernel oil so often used as a substitute.

Whilst we believe that almond oil will always be *facile princeps* amongst fixed oils, we see no reason why the true peach or apricot kernel oils should not continue to find a useful place where they are suited to any particular manufacture; but we should certainly protest against any substitution of the one for the other without the knowledge of the purchaser.

The subjoined table gives the results of our observations on oils from various sources:—

| No. | Name                       | Sp. Gr. at $15^{\circ}\text{C}$ . | Saponif. Value | Hübl, Iodine Value | Hegner, Bromine Thermal Test. $^{\circ}\text{C}$ . | Nitric-acid Test            |                                             | Bieber's Test      |
|-----|----------------------------|-----------------------------------|----------------|--------------------|----------------------------------------------------|-----------------------------|---------------------------------------------|--------------------|
|     |                            |                                   |                |                    |                                                    | At First                    | Afterwards                                  |                    |
| 1   | Mazagen bitters ...        | 0.9188                            | 191.5          | 101.26             | $21^{\circ}$                                       | White greenish yellow >2    | White, solid, yellow oil, colourless liquid | Yellowish white >2 |
| 2   | Barbary bitters ...        | 0.9178                            | 192.4          | 98.22              | $21^{\circ}$                                       | White greenish yellow <1    |                                             | Yellowish white <1 |
| 3   | Barbary bitters ...        | —                                 | —              | 99.14              | $22^{\circ}$                                       | —                           |                                             | —                  |
| 4   | Canary bitters ...         | 0.9188                            | —              | 98.33              | $21.2^{\circ}$                                     | White greenish yellow =1    |                                             | White =5 and 6     |
| 5   | Sicily bitters ...         | 0.9188                            | —              | 95.94              | $20.6^{\circ}$                                     | White greenish yellow =1    |                                             | White =4 and 6     |
| 6   | Blanch Valencia, sweet ... | 0.9185                            | —              | 95.8               | $20.8^{\circ}$                                     | White                       |                                             | White =4 and 5     |
| 7   | Persian bitters ...        | 0.9177                            | 190.8          | 98.86              | $21^{\circ}$                                       | White greenish yellow =1    | White, solid, yellow oil, colourless liquid | Buff white =10     |
| 8   | Persian bitters ...        | —                                 | —              | 96.8               | —                                                  | White greenish yellow =1    |                                             | White =4, 5, 6     |
| 9   | French pressed ...         | 0.9191                            | —              | 97.5               | $22^{\circ}$                                       | White                       |                                             | —                  |
| 10  | Peach kernel ...           | 0.9185                            | 191.2          | 95.15              | $21.6^{\circ}$                                     | Pale pink, quickly changing | Deep orange oil, colourless liquid          | Buff white =7      |
| 11  | Syrian kernel ...          | 0.9182                            | —              | 100.7              | $22^{\circ}$                                       | Deep salmon red             |                                             | Deep salmon red    |
| 12  | French pressed III.        | 0.9218                            | —              | 118.3              | —                                                  | Deep salmon red             |                                             | Salmon red         |
| 13  | Foreign pressed ...        | 0.9180                            | 191.2          | 101.39             | $21^{\circ}$                                       | Deep salmon red             | Various brown shades                        | —                  |
| 14  | Foreign pressed ...        | 0.9222                            | 194.1          | 122.33             | $25^{\circ}$                                       | Brownish red                |                                             | —                  |
| 15  | Foreign pressed ...        | 0.9221                            | 190.7          | 120.72             | —                                                  | Brownish red                |                                             | —                  |
| 16  | Foreign pressed ...        | 0.9231                            | 192.4          | 125.82             | $26^{\circ}$                                       | Brownish red                |                                             | —                  |
| 17  | Foreign pressed ...        | 0.9233                            | 192.2          | —                  | —                                                  | Brownish red                |                                             | —                  |
| 18  | Foreign pressed ...        | 0.9228                            | —              | 122.6              | $24.8^{\circ}$                                     | Brownish red                |                                             | —                  |
| 19  | Foreign pressed ...        | —                                 | 193.2          | 114.33             | —                                                  | Brownish red                | —                                           | Blackish brown     |
| 20  | Calif. apricot kernel      | —                                 | —              | —                  | —                                                  | —                           |                                             | —                  |
| 21  | Cherry kernel ...          | 0.9303                            | —              | —                  | $25.3^{\circ}$                                     | Yellow                      |                                             | —                  |

Mem.: = shades about equal, > darker than, < lighter than.

## Preparations of Nux Vomica.

### *A Critical Note on the Official Process for the Determination of Strychnine Therein.*

By E. H. FARR, F.C.S., and R. WRIGHT, F.C.S.,  
Pharmaceutical Chemists.

The pharmacopœial process for the assay of preparations of nux vomica was devised by Dunstan and Short in connection with their research on the chemistry and pharmacy of nux vomica. They showed that from a solution slightly



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acidified with sulphuric acid strychnine was entirely precipitated in the presence of brucine, even when only 0.0015 per cent. of the former was present. They found that in the same conditions precipitation of brucine did not commence until the quantity present in solution reached 0.06 per cent. They stated that the most complete separation of the alkaloids took place in a liquid containing 0.25 per cent. sulphuric acid. The authors of the test noted the fact that the strychnine residues contained traces of brucine and the brucine traces of strychnine, which were removed by reprecipitation. Vigorous stirring of the solution with a glass rod in order to induce precipitation is highly recommended.

Since Dunstan and Short's research the ferrocyanide process has been subjected to criticism by Schweissinger, whose conclusions may be summarised as follows:—

(a) Strychnine ferrocyanide is perfectly insoluble in water acidulated with sulphuric acid.

(b) Brucine ferrocyanide is not completely soluble in acidulated water, but separates out at once in small quantity, and after some time almost entirely.

(c) Separation by this method does not give satisfactory results, those for the strychnine being always too high and the brucine too low, being largely dependent upon the concentration of the liquid and the time occupied in the precipitation.

(d) Ferrocyanide salts decompose quickly in moist air into free alkaloid, ferri-cyanide, and water.

The process has also been criticised by Harvey,\* who showed that if the volume of liquid extract and tincture ordered in the Pharmacopœia assay-process be taken, the quantity of alkaloids present would greatly exceed the maximum limit laid down by Dunstan and Short. Harvey calculated that 10 c.c. liquid extract would contain 0.32 gramme, and 100 c.c. tincture 0.5 gramme alkaloids. In practically working the process he had found that in washing the precipitated ferrocyanides a considerable quantity of strychnine was carried into solution. In one instance no less than 0.012 gramme was recovered from 200 c.c. wash-water. He reckoned that on an average 0.006 gramme of strychnine was dissolved by 100 c.c. wash-water, and proposed that the volume of wash-water should be limited to 50 c.c., and that not more than 5 c.c. liquid extract or 30 c.c. tincture should be taken for each determination.

Before commencing practical work on the subject the present authors prepared pure brucine by re-crystallisation of commercially pure brucine from hot 90-per-cent. alcohol by cooling and adding water until crystallisation commenced. The first portion of the crystals was rejected. More water

was then added, and abundant crystallisation induced. The crystals were separated, washed with dilute alcohol, dried, and finally rendered anhydrous, as in the official assay-process.

Before dealing with that process it was thought essential to ascertain the conditions under which the respective alkaloids and mixtures of the two were removed from solution by potassium ferrocyanide.

Experiments made in summer (62° to 68° F.) and winter (40° to 42° F.) showed that strychnine is almost entirely precipitated by potassium ferrocyanide from a slightly-acidified solution. Only insignificant traces (not more than  $\frac{1}{10}$  milligramme or  $\frac{1}{100}$  milligramme) being found in the wash-waters and mother liquor. Brucine, it was found, is not thrown down so rapidly, and from dilute solutions is precipitated with difficulty, unless the liquid is well stirred, when precipitation may be induced at low temperatures in a solution containing only 0.02 gramme of alkaloid. Repeating the experiments with the mixed alkaloids it was found that in certain circumstances strychnine may be perfectly removed from a solution super-saturated with brucine ferrocyanide without the latter being removed in any appreciable quantity. [The experimental data were submitted to the meeting.]

The experiments repeated in winter gave results indicating that at low temperatures the precaution of taking 5 c.c. liquid extract in place of 10 c.c. will not insure accurate results, even where 200 c.c. of wash-water is used instead of 50 c.c. as recommended by Harvey.

Experiments were next made on the solubility of strychnine ferrocyanide, and it was found that although strychnine is almost entirely removed from solution in water slightly acidified with sulphuric acid by potassium ferrocyanide, strychnine ferrocyanide is slightly soluble in water containing the same proportion of acid as the mother liquor from which precipitation has taken place. Brucine ferrocyanide, on the other hand, is fairly soluble in water acidified with sulphuric acid, and a dilute solution of the alkaloid in this liquid is with difficulty precipitated by potassium ferrocyanide. This is particularly the case at high temperatures. When, however, precipitation has been induced in such a solution, it will go on, especially at low temperatures, until almost all the alkaloid has been thrown down. The addition of potassium ferrocyanide to the wash-water with a view of preventing the abstraction of strychnine from the precipitate is not feasible, seeing that the solution of the brucine is also almost entirely prevented thereby. The effect of stirring in promoting the precipitation of brucine is most remarkable. If to a solution containing 0.06 gm. alkaloid in 200 c.c. potassium ferrocyanide be added, and the mixture shaken, no precipitation takes place. If, however, the solution be well stirred, a bulky precipitate is quickly produced. This has a practical bearing upon the pharmacopœial assay-process in working, while it is important that stirring should be avoided, seeing that the removal of strychnine can be effected without it. When strychnine is precipitated by potassium ferrocyanide in the presence of brucine, the precipitate always contains more or less of the latter, and if brucine be present in the solution in large proportion, the quantity of this alkaloid in the precipitate may even exceed the amount of the strychnine.

Strychnine containing a small proportion of brucine may be almost entirely freed from this alkaloid by reprecipitation. Should the proportion of brucine to strychnine be large, it is necessary to wash well with acid-water in order to get rid of it. This is effectual in removing everything except the last traces of alkaloid. Strychnine ferrocyanide is almost insoluble in water at 40° F. containing 2.5 per cent. diluted sulphuric acid, but the solubility is increased fourfold at 100° F. Brucine ferrocyanide is fairly soluble in the same liquid, the solubility increasing at higher temperatures in the same ratio as that of strychnine ferrocyanide.

If too large a volume either of the liquid extract or tincture be taken for assay a considerable amount of brucine is liable to be precipitated. This is not, however, invariably the case. Thus in assaying liquid extract of nux vomica, the amount present in the first strychnine precipitate was sufficient to have thrown the strychnine results completely wrong, unless the precaution had been taken to employ a volume of wash-water amply sufficient to remove it. When 5 c.c. only of the liquid extract was taken the quantity of

\* THE CHEMIST AND DRUGGIST, vol. liv., p. 61.



brucine removed was not more than would have been dissolved by 100 c.c. of wash-water. It is, however, practically impossible to obtain pure strychnine by precipitation from a solution containing brucine; even three or four precipitations and re-solutions yielding apparently pure strychnine will leave in the product sufficient brucine to give a reaction with nitric acid.

The practical results of experiments, together with the observations made and the experience gained during the making of the same, justify the following conclusions and commendations:—

1. The assay-process of the pharmacopœia gives results which, though not absolutely accurate, are sufficiently so for all practical purposes.
2. The volume of liquid taken should not exceed 5 c.c. liquid extract or 30 c.c. tincture. [As recommended by Harvey.]
3. 200 c.c. wash-water at a stated temperature, preferably 100° (38° C.), should be employed, and a correction made for strychnine dissolved. [Harvey suggested 50 c.c.]
4. In carrying out the process the Pharmacopœial instructions to simple agitation without stirring, and as to the length of time allowed for precipitation of the strychnine, are to be strictly served, as success depends altogether upon the conditions under which the process is carried out.

### Official Strophanthus Seed.

By P. E. F. PERRÈDES.

This contribution to pharmacognosy was a lengthy monograph, which is to be printed in full in the *Year-book of Pharmacy* with lithographed illustrations. The following is an abstract of the communication prepared by the author:—An examination of typical East African "Kombé" seeds, all obtained from the same pod, reveals the following facts:—The seeds vary considerably in size and shape. A ventral, more or less median, ridge extends from the apex of each seed to half or over two-thirds of the way down; somewhere on this ridge the funicle-scar is found, but its position is variable. The hairs on their surfaces are stiff and silvery, pointing upwards, and are arranged in longitudinal rows. The colour of a scraped seed is some shade of green or brownish-green; that of the intact seeds varies with the position of the observer with regard to the seed and to the incident light, this being due to the disposition of the hairs. By soaking, the seeds can be separated into three distinct portions—seed-coats, albumen, embryo—whose details can be observed. The seed-coats and the albumen are longitudinally ridged and grooved; the grooves in the seed-coats are filled up by the outwardly-directed epidermal hairs. The cells of the epidermis of the seed-coats show on careful examination considerable variations, and in most cases a more complicated structure than has hitherto been supposed; their hairs never exceed 1 millimetre in length. The appearance presented by their side-walls in transverse section, although doubtless of diagnostic value, is far from uniform, and should be taken into consideration in comparing different varieties of strophanthus seeds. The sub-epidermal layers of the seed-coats in a soaked seed may be roughly divided into three regions: a thin inner mucilaginous strip, a middle pigmented band, and irregularly arranged loose outer aggregations occurring only under the ridges; the cells of these layers have very thin walls and thickened corners, intercellular spaces are absent. Under the ventral median ridge of the seed these three regions are well marked, and in the outer loose tissue, below the insertion of the funicle, the spiral vessels of the raphe are situated; spiral vessels occur nowhere else in the seed-coats, and I have found no evidences of laticiferous tissue. The cells of the albumen present very different appearances according to the conditions of observation, but it is very probable that they are polygonal and thin-walled with the exception of those of the outermost layer, whose outer walls are thickened, and of those constituting the innermost compressed layers. The embryo consists of two straight plano-convex cotyledons, joined by a well-marked radicle directed towards the apex of the seed; laticiferous tubes occur whose distribution is conveniently made out with ruthenium red in lead acetate. The cells of the embryo contain aleurone grains and oil in abundance, the latter not visible as such till the section be stained with aqueous reagents; starch also occurs in very small grains, especially in the midribs of the cotyledons.

The contents of the albumen are similar to those of the embryo, but more scanty and difficult to make out; large vacuoles are present; the starch grains may attain 0.01 mm. The pigment of the seed-coats is probably chlorophyll. The action of concentrated sulphuric acid is constant in the case of the albumen, but variable in that of the embryo, the former always exhibiting a green colour in this reagent, the latter various shades of green, green mottled with red, or green in one cotyledon and red in the other. The taste of the seeds is intensely bitter.

From what has been said it will be seen that these results are most disappointing, inasmuch as every histological character upon which the identification of the different varieties of "Kombe" seeds has hitherto been based, is found, almost without exception, to exist in seeds obtained from one and the same pod; and although I approached the question with every prejudice in favour of Dr. Blondel's conclusions, I have unwillingly been compelled to abandon them one after the other.

I desire to thank Dr. F. B. Power and Professor H. G. Greenish for the advice and assistance they have given me upon the many matters about which I consulted them. To our esteemed President, Mr. E. M. Holmes, F.L.S., I am especially indebted for invaluable help and for kind suggestions during the progress of this investigation.

### Liquor Ferri Perchloride Fortis.

By THOMAS TYRER and ALBERT LEVY.

In a paper read before the British Pharmaceutical Conference last year there was considerable discussion as to how the percentage and sp. gr. given by the B.P. stands in comparison to the various tables and to other Pharmacopœias. It is probable that manufacturers do not make iron-perchloride solutions according to the method described by the Pharmacopœia.

Bernard S. Proctor, in his "Manual of Pharmaceutical Testing," notes "that manufacturers do not now commonly follow this method." Even if iron-perchloride solutions are prepared according to the B.P. method, such solutions do not stand both tests required by the Pharmacopœia—viz., the amount—1.6 gm. of iron oxide obtained by incineration of the ammonia precipitate from 5 c.c. of the solution, and sp. gr. about 1.420. If we allow for the word "about," a variation in sp. gr. of 1.419 to 1.425, the percentage of iron perchloride calculated as  $\text{Fe}_2\text{Cl}_6$ , according to the B.P., varies from 45.81 to 45.61, as follows:—

| Sp. Gr. | Per cent. $\text{Fe}_2\text{Cl}_6$ |
|---------|------------------------------------|
| 1.419   | ... 45.81                          |
| 1.420   | ... 45.77                          |
| 1.421   | ... 45.74                          |
| 1.422   | ... 45.71                          |
| 1.423   | ... 45.67                          |
| 1.424   | ... 45.64                          |
| 1.425   | ... 45.61                          |

= 1.6 gramme  $\text{Fe}_2\text{O}_3$  in 5 c.c. liquid.

The B.P. 1885 required sp. gr. about 1.420, and that "a fluid drachm should yield between 15 and 16 gr. of  $\text{Fe}_2\text{O}_3$ ." Allowing for the word "about" as before, the percentage of iron sesquichloride comes out in this case as follows:—

| Sp. Gr. | Per cent. $\text{Fe}_2\text{Cl}_6$ |
|---------|------------------------------------|
| 1.419   | ... 39.19-41.79                    |
| 1.420   | ... 39.15-41.76                    |
| 1.421   | ... 39.13-41.73                    |
| 1.422   | ... 39.10-41.70                    |
| 1.423   | ... 39.07-41.67                    |
| 1.424   | ... 39.04-41.64                    |
| 1.425   | ... 39.02-41.61                    |

It is impossible, as has often been stated by various authors, to obtain commercial samples of 1.420, the high



MR. LEVY.

percentage required by the B.P. 1898. The following is a list of different commercial samples which the authors have examined:—

Table I.

| Samples    | Sp. Gr. | 5 c.c.<br>= Gramme<br>Fe <sub>2</sub> O <sub>3</sub> | 100 parts<br>contain<br>Fe | 100 parts<br>contain<br>Fe <sub>2</sub> Cl <sub>3</sub> |
|------------|---------|------------------------------------------------------|----------------------------|---------------------------------------------------------|
| A1         | 1.41996 | 1.298                                                | 12.81                      | 37.13                                                   |
| A2         | 1.43102 | 1.355                                                | 13.26                      | 38.48                                                   |
| A3         | 1.48991 | 1.545                                                | 14.52                      | 42.14                                                   |
| B1         | 1.42286 | 1.382                                                | 13.65                      | 39.63                                                   |
| B2         | 1.43827 | 1.445                                                | 14.07                      | 40.83                                                   |
| B3         | 1.47065 | 1.567                                                | 14.92                      | 43.30                                                   |
| B4         | 1.49162 | 1.619                                                | 15.22                      | 44.19                                                   |
| C          | 1.41774 | 1.347                                                | 13.30                      | 38.60                                                   |
| H          | 1.42417 | 1.297                                                | 12.75                      | 37.00                                                   |
| B.P., 1899 | 1.42    | 1.6                                                  | 15.77                      | 45.77                                                   |
| B.P., 1885 | 1.42    | 1.3681-1.4593                                        | 13.49-14.38                | 39.15-41.76                                             |
| F          | 1.42479 | 1.424                                                | 13.99                      | 40.61                                                   |
| G1         | 1.48808 | 1.644                                                | 15.46                      | 44.86                                                   |
| G2         | 1.488   | 1.609                                                | 15.09                      | 43.79                                                   |
| E          | 1.42002 | 1.400                                                | 13.80                      | 40.05                                                   |
| D1         | 1.42002 | 1.416                                                | 13.95                      | 40.50                                                   |
| D2         | 1.49209 | 1.656                                                | 15.54                      | 45.09                                                   |
| D3         | 1.44303 | 1.672                                                | 16.22                      | 47.07                                                   |
| D4         | 1.47264 | 1.731                                                | 16.46                      | 47.75                                                   |

A sample (F) made strictly according to the requirements of the Pharmacopœia, yielded 1.424 grammes of iron oxide, and sp. gr. of 1.42479. The maximum quantity of Fe<sub>2</sub>O<sub>3</sub> which 5 c.c. of an iron perchloride gives according to the B.P. is 1.44 gramme theoretically. A sample made exactly according to Mr. Bird's suggested alteration of the P.B. method (G1) yielded 1.644 gramme of Fe<sub>2</sub>O<sub>3</sub>. Mr. Bird found in his preparation (G2) 1.604 gramme of Fe<sub>2</sub>O<sub>3</sub> in 5 c.c.

The authors next referred to the differences in the tables showing the relation between the density and Fe<sub>2</sub>Cl<sub>3</sub> strength of ferric-chloride solutions, and submitted a comparative table compiled from Franz's, Schult's, Fremy's, and Hager's tables. They also exhibited the following table, showing the factors for liq. ferri perchlor. in different pharmacopœias:—

| Name of Pharmacopœia                  | Where published | Date | Sp. gr.                | % Fe         | % Fe <sub>2</sub> Cl <sub>3</sub> |
|---------------------------------------|-----------------|------|------------------------|--------------|-----------------------------------|
| Pharmacopœia Austriaca ...            | Vienne          | 1889 | 1.28                   | —            | —                                 |
| Pharmacopœia Belgica II               | Bruxelles       | 1885 | 1.26                   | 8.97         | 26                                |
| Pharmacopœia Danica ...               | Kopenhagen      | 1893 | { 1.298 }<br>{ 1.302 } | 10           | —                                 |
| Pharmacopœia Nederlandica III         | S'Gravenhage    | 1889 | { 1.441 }<br>{ 1.488 } | 14.5<br>15.5 | —                                 |
| Codex Medicamentarius                 | Paris           | 1884 | 1.26                   | —            | 26                                |
| Pharmacopœia Germanica III...         | Berlin          | 1895 | { 1.280 }<br>{ 1.282 } | 10           | —                                 |
| Pharmacopœia Hungarica II ...         | Budapest        | 1888 | { 1.280 }<br>{ 1.283 } | 10.3         | —                                 |
| Farmacopœia Officielle d'Italia ...   | Roma            | 1892 | { 1.469 }<br>{ 1.480 } | —            | 44-45                             |
| Pharmacopœia Japonica                 | Tokyo           | 1891 | { 1.280 }<br>{ 1.282 } | 10           | 29                                |
| Pharmacopœia Mexicana                 | Mexico          | 1896 | 1.26                   | —            | —                                 |
| Pharmacopœia Norvegica                | Kristiania      | 1895 | { 1.280 }<br>{ 1.282 } | 10           | 30                                |
| Rossieskania Pharmacopœia IV          | Petersburg      | 1891 | 1.280                  | —            | —                                 |
| Pharmacopœia Oficial Española VI      | Madrid          | 1884 | 1.26                   | —            | 27                                |
| Pharmacopœia Helvetica III ...        | Zurich          | 1893 | { 1.28 }<br>{ 1.29 }   | 10           | —                                 |
| Pharmacopœia of the United States VII | Philadelphia    | 1894 | 1.387                  | 13           | 37.8                              |

They also showed tables of curves embodying the various factors determined, and as a result of a study of the curves it was demonstrated that practically all data in foreign pharmacopœias, as well as solutions prepared by dissolving ordinary sublimed sesquichloride in water, agree with Hager's table, which shows that that of Landolt and Poinstein is correct.

The authors made an approximation of the molecular weight of iron-chloride solutions (which had been exposed to the light) by dividing the percentage of iron corresponding

to chlorine by the corresponding atomic weight, and obtained figures which suggested the formula Fe<sub>2</sub>Cl<sub>3</sub>, or ferroso-ferric chloride FeCl<sub>2</sub>, FeCl<sub>3</sub>. It is probable that the table of Franz was compiled from the results of experiments made by dissolving the freshly-prepared and sublimed-iron sesquichloride to certain gravities, and it would seem that this almost theoretical table was adopted as the B.P. standard. It is impossible to get this high percentage on the technical scale, and even if great care is taken in making a sample exactly according to the B.P. directions (F) only a percentage which is near Hager's table can be obtained, whilst the best samples obtained in commerce and not made according to the B.P. 1898, are of percentage within the limits of the B.P. 1885 (B1). Considering the fact that several samples prepared by various manufacturers as well as by dissolving ordinary solid iron perchloride in water, practically agree with the requirements of the B.P. 1885, with nearly all foreign pharmacopœias, and with Hager's table, the authors suggest going back to the standard of the 1885 British Pharmacopœia in a future edition.

### Mercurous Iodide.

By FREDERICK B. POWER, Ph.D.

Although mercurous iodide is not recognised by the British Pharmacopœia, it is considerably used in this country, and the committee of Canadian pharmacists has recommended that hydrargyri iodidum flavum, U.S.P., should be included in the Colonial and Indian Addendum of the Pharmacopœia (THE CHEMIST AND DRUGGIST, September, 1899, page 448).

A method for the preparation of a pure precipitated mercurous iodide was proposed by Henry MacLagan in 1883 (*Proc. Amer. Pharm. Assoc.*, 1883, page 209). He regarded the process then official in the United States and most of the other Pharmacopœias, by triturating together mercury and iodine, as objectionable, particularly because of the invariable formation of red iodide, and the difficulty of removing the latter. In 1884 MacLagan published another paper (*P.A.Ph.A.*, 1884, page 442), in which he gave analyses of the pure and commercial iodides, proving that pure mercurous iodide has a bright yellow colour, and also disproving the existence of the so-called mercurioso-mercuric

iodide. The fact that pure mercurous iodide, both in its crystallised and in its amorphous form, has a yellow colour was likewise definitely established by A. Stroman (*Ber. d. deutsch. chem. Ges.*, 20, 1887, page 2818; see also *P.J.* January, 1898, page 87). Further proof of the non-existence of a mercurioso-mercuric iodide, Hg<sub>2</sub>I<sub>2</sub>, which was first announced by Boullay, and has been stated by Schlagdenhauffen (*A.J.P.*, 1877, page 598) to be contained in ordinary mercurous iodide, when prepared either by trituration or precipitation, has been afforded by François (*P.J.*



January, 1898, page 68), who shows that the supposed compound is simply a mixture of the two iodides. Edward Letje (*P.A.Ph.A.*, 1888, page 167) has also given a process for the preparation of pure mercurous iodide which is essentially the same as MacLagan's.

Ten years ago Messrs. William Martindale and W. H. Salter presented a paper to the Conference on "Hydrargyri Iodidum Viride for Medicinal Use" (*C. & D.*, September, 1890, page 323, and *P.J.*, September, 1890, page 259), in which they dealt with the accepted instability of the preparation, and stated: "As there is still a considerable demand for it for medicinal use our object has been to ascertain how far this stigma is deserved, and, if possible, to find a remedy for it." In commenting on a method proposed by Lefort (*P.J.*, 1873, page 823) for the preparation of mercurous iodide by precipitating a solution of mercurous acetate with potassium iodide in the presence of sodium pyrophosphate, the authors remark: "We have not tried this process because we have understood the product to be unstable; it is too pure to be stable." Messrs. Martindale and Salter then suggested a method for making a green iodide of mercury by the old process of trituration, but with the use of 25 per cent. more mercury than is theoretically required, so that about 13.2 per cent. of free mercury is contained in the finished product. The authors then arrived at the following general conclusions:—

The samples are not pure. If the preparations were again made official this could be recognised. But we hold that a green iodide of mercury can be so prepared, and with reasonable care it can be kept sufficiently stable and uniform in appearance for use in medicine. The instability of this preparation, we think, has been overestimated, as the amount of mercuric or red iodide found in the worst sample examined is insignificant, and we therefore consider that it has been condemned without just cause, as the dose, 1 to 3 gr., in the last (1867) B.P. was misleading and much too large,  $\frac{1}{2}$  to  $\frac{1}{4}$  gr. being the dose usually given, and generally with good results. It is mild in action, and as a useful remedy we feel sure it will continue to be prescribed.

Since yellow mercurous iodide was recognised by the U.S.P. in 1890, and has been made on a large scale by chemical-manufacturers and extensively employed in medical practice, no observation has been recorded as to its instability when properly kept, nor of any untoward effects resulting from its use. The author obtained specimens of the yellow iodide from leading American manufacturers, and prepared some himself. Analyses of these compared with the green iodide (prepared according to the German Pharmacopœia Supplement, the French Codex, and Messrs. Martindale and Salter's formula) were analysed. All were quite free from mercuric iodide. The amount of iodine or pure mercurous iodide contained in them was determined by Messrs. Martindale and Salter's method, which was found to give accurate results. About 0.5 to 0.8 gramme of the salt was weighed into a small flask, and 5 grammes of pure granulated zinc and 10 c.c. of 35-per-cent. acetic acid added. The flask was heated on a water-bath, and the liquid agitated occasionally, until all the mercurous iodide had dissolved, which usually required about twenty minutes. The contents of the flask were then washed into a beaker, and a slight excess of silver-nitrate solution added, together with about 1 c.c. of pure nitric acid, diluted with a little water. The liquid was then heated to boiling for a few minutes, and after the precipitate had completely subsided it was filtered off, washed, dried, and ignited. The atomic weights employed in the calculations were as follows:—Hg=200.3; Ag=107.93; I=126.85. The specimens examined may be designated as follows:—

Prepared by the writer according to the method of the U.S. Pharmacopœia, 1890.

Prepared on a larger scale by the same method, and kept for six months.

I., IV., V., VI. Specimens of yellow mercurous iodide obtained in original sealed packages from manufacturers in New York, Philadelphia, and St. Louis.

II. Prepared, by trituration, according to the German Pharmacopœia Supplement. The proportions directed are 10 parts of iodine to 16 parts of mercury, the theoretical proportions for mercurous iodide being 10 parts of iodine to 15.79 parts of mercury. The Swiss Pharmacopœia also adopts the proportions of 10 to 16.

III. Prepared, by trituration, according to the French Codex, but without extracting the product with boiling alcohol. Proportions, 10 to 16.66.

IX. Prepared, by trituration, according to Messrs. Martindale and Salter; proportions 10 to 19.67. This preparation is of a decidedly greenish colour, that of the French Codex being also greenish, while the German is described as greenish yellow, but is really a dull yellow. The intensity of the green colour is dependent upon the excess of mercury employed.

The following table presents a *résumé* of the analytical results obtained:—

| No.   | Weight of Salt Taken | Weight of AgI Found | Percentage of Iodine (Calculated for Hg <sub>2</sub> I <sub>2</sub> 38.77) | Percentage of Hg <sub>2</sub> I <sub>2</sub> |
|-------|----------------------|---------------------|----------------------------------------------------------------------------|----------------------------------------------|
| I.    | 0.8478               | 0.6102              | 38.88                                                                      |                                              |
| II.   | 0.6646               | 0.4708              | 38.27                                                                      |                                              |
| III.  | 0.5514               | 0.3902              | 38.23                                                                      |                                              |
| IV.   | 0.5056               | 0.3588              | 38.34                                                                      |                                              |
| V.    | 0.5282               | 0.3862              | 39.50                                                                      |                                              |
| VI.   | 0.4856               | 0.3438              | 38.25                                                                      |                                              |
| VII.  | 0.6446               | 0.4484              | 37.58                                                                      | 96.92                                        |
| VIII. | 0.8884               | 0.6024              | 36.63                                                                      | 94.47                                        |
| IX.   | 0.6238               | 0.3788              | 32.80                                                                      | 84.60                                        |

When tested according to the U.S. Pharmacopœia for mercuric iodide all the commercial samples, as well as the other preparations, were found to be quite free from this contamination, with the single exception of No. V., which contained slight traces of it. This specimen was contained in a white-glass bottle, and had apparently become somewhat altered by exposure. These results indicate that precipitated mercurous iodide is quite uniform in composition, and also sufficiently stable when properly protected. The facts thoroughly justify the suggestion of the Canadian committee that the pure yellow iodide should be adopted in the proposed Colonial and Indian Addendum of the Pharmacopœia.

The Wellcome Chemical Research Laboratories.

### Sandalwood Oil.

By ERNEST J. PARRY, B.Sc., F.I.C.

Since the author a few years ago reported that this oil consists in the main of alcoholic bodies, and not of aldehydes, as Chapoteaut had previously stated, several chemists have devoted themselves to the subject—notably Guerhet, Soden and Müller, and Messrs. Schimmel & Co.'s chemists. The author's results differ in a few details from some recorded by these chemists; they agree in the main. The present paper was communicated as a promised report to the Conference. He wished it to be distinctly understood that he made none of those absurd claims to priority which are so common amongst continental chemists under similar circumstances. His chief result is that the so-called santalol, which exists to the extent of about 90 per cent. in sandalwood oil,



MR. PARRY.

is a mixture of two, and possibly more, bodies of an alcoholic nature. The method of separating the alcohol used was that of Haller (*Comptes Rendus*, cviii., page 1308) for preparing certain terpene alcohols. The oil was distilled three times at a pressure of about 28–30 mm., and finally separated into the chief fractions—(1) boiling at 112° to 160°, and (2) boiling at 160° to 205°. Fraction 1 was very small, about 20 c.c. from 2,000 c.c. of oil, sp. gr. 0.930, opt. rot. – 24° 30'. It darkened considerably on treatment with metallic sodium, and when distilled at normal pressure from this metal yielded about half (11 c.c.) of a light oil, sp. gr. 0.919, opt. rot. – 22° 15'. This is undoubtedly the

hydrocarbon (or hydrocarbons) which Soden isolated under the name of santalene, but neither he nor Guerhet has proved the parts of either the *A* or the *B* santalene, into which the latter chemist claims to have separated the hydrocarbon. Specimens of about 200 c.c. of liquids labelled *A*-santalene and *B*-santalene are exhibited in the German Section of the Paris Exposition. Fraction 2 was heated with its own weight of phthalic anhydride to 120°-125° for three hours. The resulting acid phthalic esters were dissolved in caustic-potash solution, which was then treated with ether to extract neutral bodies if present. The esters, separated by acidification, were saponified, and the alkaline liquid separated after dilution. The oil, consisting of the alcohols, was then repeatedly dried over potassium bisulphate and filtered. It was a pale yellow oil of sp. gr. 0.981, opt. rot. -27° 10'. This oil so far cannot be separated into any body which can be shown to be a pure individual. On distilling under reduced pressure (35 mm.) 300 c.c. yielded the following fractions:—

|               |         | Sp. Gr. | Rotation  |
|---------------|---------|---------|-----------|
| 180°-185°     | 28 c.c. | 0.976   | - 6° 40'  |
| 185°-190°     | 42 c.c. | 0.978   | - 9° 10'  |
| 190°-195°     | 80 c.c. | 0.9785  | - 16° 23' |
| 195°-200°     | 77 c.c. | 0.9799  | - 22°     |
| 200°-205°     | 42 c.c. | 0.9824  | - 29° 6'  |
| Not distilled | 31 c.c. | —       | —         |

All that these results can be said to show is that the "alcohol" is of a complex nature, and neither these nor Guerhet's, Schimmel's, or Soden and Müller's results can be said to have shown what are the characters of any pure chemical compound from the alcoholic mixture. When sandalwood oil or its alcoholic constituents are mixed with phenyl isocyanate, a marked rise in temperature occurs, and the liquid gradually becomes semi-solid. The author has separated from this semi-solid mass, by shaking with petroleum ether and re-crystallising the dried mass from 80-per-cent. alcohol, a crystalline compound melting at 237°. This is probably a phenyl methane of one of the alcohols present in the oil; Schimmel & Co. have suggested that it is merely diphenyl urea, but the cause of the reaction does not indicate this, as it is hardly probable that phenyl isocyanate would extract water from these alcohols so readily, which would be necessary for the formation of diphenyl urea.

### British Guiana Copaiba.

By E. WIGHTMAN BELL, F.C.S.

The author has examined a sample of this copaiba given to him by Mr. E. M. Holmes, F.L.S. The oleoresin is of a pale-yellow colour, somewhat less viscous than ordinary samples of copaiba, and possesses the usual taste and smell. Its sp. gr. is 0.9797, and when evaporated to dryness a residue remained which was "hard and easily rubbed to powder."



MR. BELL.

It is almost entirely soluble in absolute alcohol, leaving only a very small quantity of flocculent insoluble matter, and is entirely soluble in petroleum spirit. When treated with the reagents named in the British Pharmacopœia for detecting the presence of gurjun balsam negative results were obtained. The oleoresin required for neutralisation of the acids present in each gramme 1.48 c.c. of normal alcoholic potash, equal to an acid\* number of 82.88, and for complete saponification a further 0.19 c.c. of normal alkali giving an ester\* number 10.64, consequently the total saponification-number was 93.52.

Evaporated on a water-bath, and finally heated in an oven having a temperature of 98°-100° C. until of constant weight,

\* The "number" in each case being obtained by multiplying the c.c. of normal alkali required for 1 gramme by 56.

the loss was 52.11 per cent., showing therefore 52.11 per cent. of essential oil and 47.89 per cent. of resin. The essential oil obtained by steam-distillation has a sp. gr. of 0.9024, and a rotation of -9° in 100-mm. tube. It did not boil below 245° C., and on fractionation yielded 34 per cent. between 245° and 251° and 57 per cent. between 251° and 255°.

The iodine absorption of the oil was 252.8 per cent. With the usual solvents it behaves in a similar manner to commercial copaiba oil.

The oil did not reduce gold chloride, and on being treated with a 5-per-cent. solution of bromine in chloroform (Dragendorff's solution) it acquired a green colour, without trace of purple. When dissolved in carbon bisulphide no colour was developed on adding nitro-sulphuric acid.

With the exception of the optical rotation of the oil this copaiba appears to answer all the characters and tests of the British Pharmacopœia, and in some respects is shown to be of a higher grade of purity than many samples which meet the official requirements. Mr. F. W. Short has pointed out that the rotation figures named in the Pharmacopœia are probably given in error, with which opinion the writer concurs.

### Copaiba.

*Its Assay and Tests.*

By E. WIGHTMAN BELL, F.C.S.

Do commercial samples of copaiba answer the requirements of the British Pharmacopœia, and should the tests therein described be altered or increased?

*Percentage of Essential Oil.*—It would be as well if a process for determination of oil was given in the Pharmacopœia, as methods vary. By heating on a water-bath, and finally in a water-oven, at a temperature of just below 100° C., until the weight be constant, very accordant results are obtained. The time occupied is somewhat long—viz., twelve to sixteen hours—but no attention is necessary, and, in the writer's opinion, this is the most trustworthy method. The percentages of oil given below were obtained by this process.

Ten samples and one of gurjun balsam were tested in this way, with the following results:—

| No.    | Sp. Gr. | Per Cent. | Rotation of Oil |
|--------|---------|-----------|-----------------|
| 1      | 0.9914  | 44.86     | —               |
| 2      | 0.9956  | 36.60     | —               |
| 3      | 0.9880  | 42.80     | - 21°           |
| 4      | 1.0096  | 38.62     | —               |
| 5      | 1.0015  | 36.03     | - 22°           |
| 6      | 0.9903  | 44.21     | —               |
| 7      | 0.9906  | 39.49     | - 16°           |
| 8      | 0.9894  | 43.85     | - 34°           |
| 9      | 0.9797  | 52.11     | - 9°            |
| 10     | 0.9324  | 72.80     | —               |
| Gurjun | 0.9566  | 69.63     | - 93°           |

No. 4 was very old, No. 9 British Guiana, and No. 10 Pará. The results show that, whilst samples are easily obtainable containing the amount of oil and answering the sp. gr. of the Pharmacopœia, other samples (otherwise of good quality) do not. All the samples were soluble, or almost entirely so, in absolute alcohol and petroleum spirit. The residues were readily reduced to powder, and no smell of turpentine was evolved on evaporation.

*Rotation of Essential Oil.*—As pointed out by Mr. F. W. Short, there is probably an error in the figures given for the rotation of the oil in the Pharmacopœia, the rotation therein stated, presumably for a 100-mm. tube, being almost identical with the figures given by Mr. J. C. Umney (*Year book of Pharmacy*, 1893) for a 200-mm. tube. The American copaiba is levorotatory is doubtless correct, but it is doubtful if genuine samples rotate within the limits of -28° to -34°. In fact, it is most probable that genuine sample rotate very considerably less. Two commercial samples of oil showed a rotation of -11° and -16°.

The oils, with three exceptions, gave a distinct violet coloration when treated with nitro-sulphuric acid after solution in carbon bisulphide, the presence of gurjun balsam being thus most probable. The depth of colour was in the



same ratio as the rotation—the greater the rotation the more marked the colour. When treated with Dragendorff's romine solution all, with these three exceptions, gave a dirty-blue to purple colour, whilst the three developed a beautifully-clear green colour. It will be seen that the addition of a small quantity of gurjun balsam very materially increases the rotation-figure of the oil.

**Boiling-point of Oil.**—All the oils commenced to boil at 150°–250° C., and a sample of oil distilled from gurjun balsam boiled at about the same temperature. The determination of the boiling-point is useful in showing the presence of turpentine, which very materially lowers it.

**Colour-tests.**—Of the two colour-tests given in the Pharmacopœia that with nitro-sulphuric acid and carbon sulphide is undoubtedly the better, the acetic and nitric test being much less sensitive and slower. With reference to the first-named it is important, in order to obtain the best results, that the tube in which the test is performed should be quite dry. In my opinion absolutely pure copaiba is very uncommon—almost unobtainable. Of the samples previously named none reacted when the test was applied to the oleoresin, but, with the three exceptions named, the presence of gurjun was shown on testing the distilled oil. If it is wished to obtain an absolutely pure copaiba (which, considering the conditions of collection, is of doubtful probability), the test should be made on the oil and not the oleoresin as at present.

**Titration Figures.**—About 5 grammes of copaiba are dissolved in warm, neutral alcohol, phenolphthalein added, and titrated with alcoholic potash of known strength; the number of c.c. of normal alkali used for each gramme multiplied by 56 gives the "acid-number." A further quantity of alcoholic potash (an excess) is then added, and the contents of the flask kept boiling for about an hour; after dilution with alcohol the solution is to be titrated with standard acid; the number of c.c. of normal alkali consumed by each gramme multiplied by 56 gives the "ester-number." The "saponification-number" is the sum of the acid and ester numbers. The following are the numbers obtained by treatment of the same samples:—

| No.    | Acid No. | Ester No. | Sapon. No. | Resin factor<br>= Resin<br>Sapon. No. |
|--------|----------|-----------|------------|---------------------------------------|
| 1      | 82.32    | 15.68     | 98.00      | 0.56                                  |
| 2      | 93.52    | 19.60     | 113.12     | 0.56                                  |
| 3      | 78.96    | 22.96     | 101.92     | 0.56                                  |
| 4      | 91.28    | 19.60     | 110.88     | 0.55                                  |
| 5      | 91.84    | 20.16     | 112.00     | 0.57                                  |
| 6      | 87.92    | 11.20     | 99.12      | 0.56                                  |
| 7      | 87.36    | 21.84     | 109.20     | 0.55                                  |
| 8      | 80.08    | 14.56     | 94.64      | 0.59                                  |
| 9      | 82.88    | 10.64     | 93.52      | 0.57                                  |
| 10     | 31.36    | 23.52     | 54.88      | 0.49                                  |
| Gurjun | 10.08    | 6.16      | 16.24      | 1.87                                  |

It will be observed that there is a very close connection between the saponification-number and the percentage of resin, and that the factor for commercial samples (obtained by dividing the resin-percentage by the saponification-number) is between 0.5 and 0.6, while the factor for gurjun balsam is about 1.8. Qualitative tests on the oleoresins have shown that copaibas which have the lowest factors give the slightest reaction for gurjun when applied to the distilled oil.

It would suggest that a definite method for obtaining the percentage of oil be given, preferably that of evaporation at about 100° C.; that the rotation figures of the essential oil be lowered; and that titration of the oleoresin be introduced as a "resin-factor" added. My best thanks are due to my assistant—Mr. F. Y. Cope—for kind help in making many of the estimations for this and the preceding paper.

### Note on Phenol Suppositories.

By FRANK R. DUDDERIDGE, F.C.S., Pharm. Chem.

My attention has frequently been called to the difficulty experienced in obtaining these suppositories sufficiently firm in hot weather to be readily removed from the mould, the

quantity of white beeswax—2 gr. in each suppository—ordered in the official formula being apparently inadequate to harden them sufficiently. Doubling the wax does not improve matters much. The tallowy, somewhat plastic, consistence of the mass suggested that wax produced the alteration in the physical consistence, and that oil of theobroma might do well alone. It was found that when care was taken to melt the oil of theobroma at as low a temperature as possible, then add the phenol and pour into moulds, the result left nothing to be desired, the suppositories being quite firm and brittle, and solidifying much more rapidly than those containing wax, thus proving that the alteration in consistence is not due to the phenol, but to the wax. A similar result was obtained in the case of suppositories each containing 5 gr. of chloral hydrate. When the finely powdered chloral hydrate was stirred into the just melted cocoa-butter a firmer and more brittle suppository was produced than when white beeswax was added, but with larger quantities of chloral hydrate the result was less satisfactory.

Melting-points of the oil of theobroma, the B.P. phenol suppositories, and phenol suppositories without wax were taken; the same sample of oil of theobroma being used in each case, and the method given under "Cera Flava" in the Pharmacopœia being followed, with the subjoined results:—

|             | Oil of<br>Theobroma | Phenol<br>suppositories,<br>B.P. | Phenol sup-<br>positories<br>(without wax) |
|-------------|---------------------|----------------------------------|--------------------------------------------|
| 1st ...     | 31.0° C.            | 51.0° C.                         | 31.5° C.                                   |
| 2nd ...     | 30.5° C.            | 51.5° C.                         | 31.0° C.                                   |
| 3rd ...     | 30.5° C.            | 50.5° C.                         | 31.5° C.                                   |
| 4th ...     | 31.0° C.            | 51.5° C.                         | 31.5° C.                                   |
| Average ... | 30.75° C.           | 51.125° C.                       | 31.375° C.                                 |

As the melting-point is so much increased by the wax without producing the required firmness, I suggest that oil of theobroma should be used. My thanks are due to Mr. S. R. Blackburn for his kind assistance in these experiments.

### Berberine Phosphate.

By FRANK SHEDDEN, B.Sc., A.I.C.

There being uncertainty as to the composition of this salt, Dr. Power suggested an investigation of the subject. The first part of the paper was a *résumé* of the literature on the subject from the time of its introduction, in 1877, by Dr. T. L. A. Grove; but it will suffice to state that various formulæ have been assigned to the salt, Schmidt making it  $(C_{20}H_{17}NO_4)_3 \cdot (H_3PO_4)_2 \cdot 5H_2O$ , and Coblenz, the most recent worker on the subject, giving it as  $C_{20}H_{17}NO_4 \cdot 7H_3PO_4$ —a formula previously determined by Parsons and Wrampelmeier.

For the present investigation berberine phosphate was prepared by the interaction of berberine acetone (a compound easily obtained pure) with an excess of phosphoric acid, and re-crystallising the product. The salt was of a bright-yellow colour. It did not increase in weight even in a damp atmosphere.\* The crystallised salt is soluble in 14.3 parts of water at 16° C.; the dehydrated salt in 15 parts of water at 15–16° C.

The analysis of this salt was conducted as follows:—

(a) The water of crystallisation was determined by heating to 110° C. until of constant weight.

(b) For the determination of the phosphoric acid a weighed quantity of the salt was treated in a conical flask with about 5 c.c. of pure sulphuric acid, powdered potassium nitrate added, and the liquid again heated until it was colourless, or only pale yellow, and the red fumes had disappeared. It was then diluted with water, boiled, and made alkaline with ammonia. The phosphoric acid was determined in this liquid by precipitating with magnesia mixture in the usual way.

(c) The base was determined by dissolving a known weight of the salt in hot water, adding a slight excess of hydrochloric acid, and then an excess of solution of platonic chloride, equal to about twice the amount required to form the platinum double salt. The liquid containing the precipitate was evaporated to a small bulk on a water-bath, alcohol added, and the precipitate thoroughly washed with alcohol, first by decantation and then on a filter. It was then finally ignited until of constant weight.

\* Parsons and Wrampelmeier note that the salt obtained by them by the use of acid calcium phosphate readily absorbed water, but not so readily when re-crystallised.

Careful determinations were made, according with the following results:—

|                            | I.    | II.   | III.  | IV.   | Calculated for<br>$C_{20}H_{17}NO_4 \cdot 2H_3PO_4$<br>$+ 1\frac{1}{2}H_2O$ |
|----------------------------|-------|-------|-------|-------|-----------------------------------------------------------------------------|
| (a) $H_2O$ ...             | 4.80  | 4.88  | —     | —     | 4.83 per cent.                                                              |
| (b) $H_3PO_4$ ...          | 35.03 | 35.70 | —     | —     | 35.13 per cent.                                                             |
| (c) $C_{20}H_{17}NO_4$ ... | —     | —     | 59.43 | 60.01 | 60.04 per cent.                                                             |
|                            |       |       |       |       | 100.00                                                                      |

Some experiments were made to ascertain whether the base could be accurately estimated by means of the crystalline chloroform compound,  $C_{20}H_{17}NO_4 \cdot CHCl_3$ . For this purpose a weighed portion of berberine phosphate was dissolved in water, an excess of soda added, and the base extracted by shaking out with chloroform. The chloroform solution was evaporated, and the residue, when dry, heated in a water-oven till of constant weight. Similar experiments were made with berberine nitrate and phosphate, and in no case were concordant results obtainable by this method, the difference being as much as 1 per cent.

Berberine phosphate was prepared according to Parsons and Wrampelmeier's method. After the removal of the product, and allowing the mixed mother-liquor and alcoholic washings to stand overnight, a precipitate separated out. On filtering this off it was found to be quite white, and to consist of calcium phosphate with traces of sulphate. The berberine phosphate obtained was of a bright-yellow colour, and did not absorb water when exposed to the air, but darkened slightly at  $110^\circ C$ . It contained some calcium, and on re-crystallising from alcohol left about 5 per cent. of a white residue, consisting of calcium phosphate and sulphate. The re-crystallised salt was in the form of bright-yellow silky needles, and was free from calcium and sulphates. Analyses were made of the salt both before and after re-crystallisation, and they served to show that the amount of phosphoric acid in the product is not in accordance with the formula suggested by Parsons and Wrampelmeier for a salt obtained by the method employed by them.

The berberine phosphate prepared by the author, either by treating pure berberine acetone with an excess of phosphoric acid, or by the interaction of mono-berberine sulphate and acid calcium phosphate, and subsequent purification of the product, has the composition  $C_{20}H_{17}NO_4 \cdot 2H_3PO_4$ , with varying amounts of water of crystallisation.

The accuracy of the determinations of the base by means of platonic chloride was confirmed by control experiments with pure berberine salts of well-established composition, such, for example, as the nitrate and sulphate.

It was thought of interest to compare the results obtained by this method with the less accurate determinations of the berberine by weighing it in the form of the berberine-chloroform compound, and these are presented in the following table:—

| Berberine Salt used.<br>(B=Berberine,<br>$C_{20}H_{17}NO_4$ )                  | Weight of Salt Taken                 | Weight of Chloroform Compound Obtained | Weight of Platinum Residue | Weight of Corresponding Amount of Base | Percentage of Base Found      | Percentage of Base Calculated.<br>$C_{20}H_{17}NO_4 = 335$ ;<br>Pt. = 494.8 |
|--------------------------------------------------------------------------------|--------------------------------------|----------------------------------------|----------------------------|----------------------------------------|-------------------------------|-----------------------------------------------------------------------------|
| $B.HNO_3$ ...                                                                  | 0.5274<br>0.1956                     | 0.6074                                 | —<br>0.0479                | 0.4474<br>0.1647                       | 84.90<br>84.20                | —<br>84.16                                                                  |
| $B.H_2SO_4$ ...                                                                | 0.3831<br>0.3334<br>0.1953           | 0.4118<br>0.3594<br>—                  | —<br>0.0441                | 0.3035<br>0.2649<br>0.1516             | 79.23<br>78.29<br>77.62       | —<br>77.35                                                                  |
| $B.2H PO_4 + 1\frac{1}{2}H_2O$<br>(From acetone compound with phosphoric ac.)  | 0.6574<br>0.5826<br>0.2268<br>0.1868 | 0.5312<br>0.4788<br>—<br>—             | —<br>0.0392<br>0.0026      | 0.3915<br>0.3529<br>0.1348<br>0.1121   | 59<br>60.56<br>59.55<br>60.43 | —<br>60.04<br>—                                                             |
| $B.2H_3PO_4 + 1H_2O$<br>(From $B.H_2SO_4$ and $CaH_2(PO_4)_2$ re-crystallised) | 0.2052<br>0.1920                     | —<br>—                                 | 0.0362<br>0.0333           | 0.1244<br>0.1162                       | 60.62<br>60.52                | —<br>61.01                                                                  |

## Notes on Opium, Olive Oil, Saccharin, and the Viscosity of Essential Oils.

By EDWIN DOWZARD, F.C.S.

*Opium.*—The B.P. describes opium as the juice obtained by incision from the unripe capsules of *Papaver somniferum*, Linn., inspissated by spontaneous evaporation. When dried and powdered it should yield not less than 9.5 and not more than 10.5 per cent. of anhydrous morphine. Years ago the late M. Conroy said (*P.J.* 3, xvi., 378):—



MR. DOWZARD.

This standard is ridiculously low, and will have the effect of depriving medicine of all the best opium that reaches this country. It is all very well to standardise preparations, but I think it is going too far when we attempt it with natural products. If we are to have a maximum and minimum standard for opium, let it be one which will include the best and exclude the inferior and adulterated kinds instead of the reverse, as now obtains. To attain this it would be necessary to raise the standard at least 2 per cent.

The following figures confirm this statement, and show that the standard could be raised considerably without inconvenience:—

### Morphine in Dried and Powdered Opium (before Standardisation).

|              |              |               |                |
|--------------|--------------|---------------|----------------|
| No. 1, 12.3% | No. 8, 12.9% | No. 15, 13.7% | No. 22, 14.3%  |
| " 2, 12.4%   | " 9, 13.0%   | " 16, 13.8%   | " 23, 14.7%    |
| " 3, 12.4%   | " 10, 13.0%  | " 17, 13.9%   | " 24, 14.9%    |
| " 4, 12.6%   | " 11, 13.2%  | " 18, 14.0%   | " 25, 14.9%    |
| " 5, 12.6%   | " 12, 13.3%  | " 19, 14.1%   | Minimum, 12.3% |
| " 6, 12.8%   | " 13, 13.4%  | " 20, 14.1%   | Maximum, 14.9% |
| " 7, 12.8%   | " 14, 13.7%  | " 21, 14.2%   |                |

*Olive Oil.*—According to the B.P. the sp. gr. of olive oil varies between 0.914 and 0.919; the latter figure is much too high, as it allows the use of inferior oils pressed at high temperatures. According to Lewkowitsch ("Chemical Analysis of Oils, Fats, and Waxes"), "the sp. gr. of olive oil varies from 0.914 to 0.917, but may rise to 0.920, and even 0.925 in the case of commercial oils expressed at a higher temperature owing to the larger proportion of palmitin." The following shows the sp. grs. and refractometer numbers (determined by means of Amagat and Jean's oleo-refractometer) of fifty-two samples of olive oil, the qualities of which range from common hair-oil to the best qualities obtainable. It will be seen that forty samples have a sp. gr. ranging between 0.9155 and 0.9165, seven a sp. gr. of 0.915, four a sp. gr. of 0.917, and one a sp. gr. of 0.9172

| No. | Sp. gr. at 15.5° C. | Refractometer Number at 22° C. |                               |
|-----|---------------------|--------------------------------|-------------------------------|
| 1   | 0.9156              | +1.5                           | Algerian.                     |
| 2   | 0.9160              | +2                             |                               |
| 3   | 0.9170              | +1                             |                               |
| 4   | 0.9160              | +3                             |                               |
| 5   | 0.9160              | 0                              | Barcelona.                    |
| 6   | 0.9160              | +1                             |                               |
| 7   | 0.9160              | 0                              |                               |
| 8   | 0.9160              | +2                             |                               |
| 9   | 0.9164              | +2                             |                               |
| 10  | 0.9160              | +1                             |                               |
| 11  | 0.9150              | +1                             |                               |
| 12  | 0.9160              | +1                             |                               |
| 13  | 0.9150              | -0.5                           | Bari, A, B, C, and qualities. |
| 14  | 0.9160              | 0                              |                               |
| 15  | 0.9160              | 0                              |                               |
| 16  | 0.9160              | 0                              |                               |
| 17  | 0.9150              | -1                             |                               |
| 18  | 0.9155              | 0                              |                               |
| 19  | 0.9150              | 0                              |                               |
| 20  | 0.9165              | +0.5                           |                               |
| 21  | 0.9165              | 0                              |                               |
| 22  | 0.9160              | +2                             |                               |



## Refractometer

Number at  
22° C.Sp. gr. at  
15.5° C.

| No | Sp. gr. at<br>15.5° C. | Refractometer<br>Number at<br>22° C. |               |
|----|------------------------|--------------------------------------|---------------|
| 23 | 0.9150                 | -0.5                                 |               |
| 24 | 0.9150                 | +0.75                                | Corfu.        |
| 25 | 0.9150                 | +1                                   |               |
| 26 | 0.9170                 | 0                                    |               |
| 27 | 0.9165                 | +1.5                                 |               |
| 28 | 0.9160                 | +1.5                                 |               |
| 29 | 0.9155                 | +2                                   | Cream Tuscan. |
| 30 | 0.9160                 | +1                                   |               |
| 31 | 0.9170                 | +1                                   |               |
| 32 | 0.9160                 | +3                                   |               |
| 33 | 0.9160                 | 0                                    | Extra Cream.  |
| 34 | 0.9172                 | +2                                   | Cream Virgin. |
| 35 | 0.9160                 | +1                                   |               |
| 36 | 0.9160                 | 0                                    | Best sublime. |
| 37 | 0.9165                 | 0                                    | Mytelene.     |
| 38 | 0.9160                 | -0.5                                 |               |
| 39 | 0.9160                 | -1.0                                 | Zante.        |
| 40 | 0.9160                 | 0                                    |               |
| 41 | 0.9170                 | 0                                    |               |
| 42 | 0.9160                 | +1                                   |               |
| 43 | 0.9160                 | +1                                   |               |
| 44 | 0.9160                 | 0                                    |               |
| 45 | 0.9160                 | 0                                    |               |
| 46 | 0.9160                 | +2.5                                 | Various.      |
| 47 | 0.9160                 | 0                                    |               |
| 48 | 0.9155                 | -1                                   |               |
| 49 | 0.9165                 | -1                                   |               |
| 50 | 0.9160                 | 0                                    |               |
| 51 | 0.9165                 | +1                                   |               |
| 52 | 0.9160                 | +1.5                                 |               |

**Saccharin.**—At the present time the two principal qualities of saccharin are known as "550" and "350," the number referring to the sweetness compared with cane-sugar. By the following method, which depends upon the solubility of saccharin in acetone, 550 can be easily and quickly distinguished from 350, and the amount of pure saccharin (550) in 50 or a mixture of 350 and 550 can be approximately estimated:—

One gramme of 550 saccharin should be perfectly soluble in 12 c.c. of acetone (at about 16° C.); if the sample is 350, or a mixture of 350 and 550, there will be a considerable amount of insoluble matter.

One gramme of 350 saccharin is treated with 10 c.c. of acetone; the mixture is thoroughly agitated and allowed to stand for about ten minutes (precautions must be taken against evaporation); 5 c.c. of the clear solution is then evaporated and the dry residue weighed; this multiplied by 200 will give the approximate percentage of saccharin present.

This method is useless for so-called "soluble saccharin."

**Viscosity of Essential Oils.**—For some time past it has been the practice of manufacturers to sell lemon oil on the basis of its citral content, but, even if this body could be determined with accuracy, it would not give much information respecting the purity or otherwise of the oil. Suppose a pure oil contained 6 per cent. of citral, then it would require about 12 per cent. of turpentine to reduce it to 5.3 per cent.; the addition of this amount of turpentine could not be detected by the citral estimation, but it could easily be detected by the polarimeter. Again, if citrene (the terpene obtained in the manufacture of concentrated lemon oil) was used instead of turpentine, neither the determination of the citral nor the optical rotation would be of any avail. We have now to contend with a sophistication which is practically impossible to detect—viz., citrene containing about 7 per cent. of added citral (from lemongrass oil). To show the impossibility of detecting such a mixture, the following figures are given:—

1. *Citrene + 7.5 per cent. citral.*—Sp. gr. 15.5° C. 0.830; opt. rot. 30° C. + 64.45°.
2. *Pure lemon oil.*—Sp. gr. 15.5° C. 0.8585; opt. rot. 20 C. + 60°.
3. *Pure lemon oil, containing 25 per cent. of above mixture.*—Sp. gr. 15.5° C. 0.8571; opt. rot. 30° C. + 61.11°.

It will be seen that such an oil as No. 3 would pass the test, and would be certified as pure.

We have made a few experiments with a Reichauer's viscometer on the viscosity of pure lemon oil, citrene, and a mixture of citrene (92.5 per cent.) and citral (7.5 per cent.), and the results indicate that useful information may be obtained by the determination of this constant.

**Viscosity Standard.**—40 c.c. water (at 20° C.) is introduced into the inner tube; the time required for 10 c.c. to run out is noted—222 seconds. The sample of oil is treated in exactly the same manner; and the viscosity number calculated as follows:—Viscosity number =  $\frac{o}{w} \times 100$ ; o = oil time in seconds; w = water time in seconds.

|                                    | Viscosity number |
|------------------------------------|------------------|
| Pure lemon oil ... ..              | 139.6            |
| Citrene ... ..                     | 105.8            |
| Citrene + 7.5 per cent. citral ... | 114.9            |

If the viscosity of lemon oil is fairly constant the above test may be of some value; this, however, can only be determined by those who are in a position to obtain absolutely authentic samples.

I have also determined the viscosity of several other oils, which are given below:—

|                        | Viscosity number |
|------------------------|------------------|
| Lime oil ... ..        | 177              |
| Bergamot oil ... ..    | 219.8            |
| Orange oil ... ..      | 112.5            |
| Citronella oil ... ..  | 536              |
| Rosemary oil ... ..    | 320              |
| Wintergreen oil ... .. | 261              |
| Sassafras oil ... ..   | 238              |

The wide differences between these oils indicate that this test, in conjunction with the usual ones, will give valuable information respecting the purity of essential oils.

## Imperial British Pharmacopœia.

Notes on some Drugs of India.

By WILLIAM MAIR, F.C.S.

In response to an invitation from the President to indicate which of the more important unofficial drugs indigenous to British India, and in actual use by native and European physicians, would be likely to present features of practical interest and utility to pharmacists in this country and generally, the following brief details are submitted. The author's experience is limited to Calcutta.

Of the forty or fifty medicinal substances, and similar number of preparations, the greater part—about thirty—represent those requested by India, and incorporated in Professor Attfeld's draft Addendum.

The question that has presented itself to some practical pharmacists is whether any or all of these are likely to come into use in medicine in this country, and which are likely to be worthy of attention that have been proved to be good for specific purposes in the land of their origin. It is not unnatural to expect that the great British Dependency which has given us nuxvomica, cannabis indica, sandalwood, kino, and chiretta should still possess the secret of others of equal individuality. There are drugs in everyday use in the districts, as distinguished from the Presidency cities, the names of which are not even known to Europeans, but it is hardly possible that any of equal value to those indicated could have escaped the notice of investigators.

It is unnecessary to discuss drugs intended for use as substitutes in India for, and alternatives of, the official imported products. It does not directly concern us how far calumba could be replaced by coscinum, its former arch adulterant; whether the wood of samadera would equal that of quassia, unless the latter were becoming scarce and dear; how far the root-bark of toddalia may represent cusparia; or cissampelos might pareira; to what extent the leaves of *Datura alba* are equivalent to those of belladonna; whether, also, cotton root-bark will make an infallible substitute for ergot; or whether the telini fly will not yield more cantharidin than the true cantharides; or the very doubtful tylophora-leaves or the root-bark of calotropis (mudar), both



MR. MAIR.

advocated for many years but never used, supersede the indispensable *ipecacuanha*. Few of these alternatives are likely to acquire much significance to pharmacists outside of India, or to importers. *Butea* gum may come to be recognised in this country as in some measure, though very imperfectly, representing the official kino; in which case the question presents itself whether the use of the Addendum may not be reciprocal, and whether those country medicines to be recognised for use in India instead of the imported drugs may not be officialised for use in this country in time of scarcity.

There are other drugs of more strictly commercial importance, which would be better considered from that point of view, but for which recognition is desirable for the adjustment of official standards. These are gummi indicum (*dhaura* gum, when clean and good quite equal to gum acacia), the oil of gingeli-seed (sesame oil), approximating to olive oil, and oleum arachidis (nut oil) proposed to be "employed in Indian pharmacy whenever olive oil is ordered in official preparations." Wherein the question of reciprocity would again arise. It is difficult to understand why, however, *crinum* bulbs should have been recommended for use instead of squill, while no mention has been made, so far, in any of the published reports, of the bulbs of either *Urginea indica* or of *Ledebouria hyacinthoides*, the squill of the bazaars, largely and regularly used in Government dispensary practice.

The following may be found to be worthy of a more definite place in medicine in this country:—

*Andrographis paniculata*.—The kroat; the dried herb (shown); perhaps the most worthy of the many simple bitters of India to recognition in addition to *chiretta*—not as a substitute for it. One of its vernacular names implies "king of bitters." Contains a neutral, non-alkaloidal bitter principle, unnamed, and has febrifuge properties which *chiretta* does not possess. For that reason is appreciated in India, and frequently prescribed in convalescence after fevers; has been employed successfully in influenza. Fluid extract: a formula will appear in the *Year-book*.

*Bela Fructus*.—Although tried in this country and found wanting, the sacred bael is the most trusted of Indian indigenous medicines—constantly prescribed by European physicians, and of unquestionable value in diarrhoea, avoiding, especially in children, the constipation attending the use of astringents. An aqueous fluid extract from the pulp of the fresh, half-ripe fruit, instead of that "imported in dried slices," will redeem its character. Another preparation in great favour in India is a confection of bael, sometimes aromatised—a valuable dietetic, in teaspoonful doses, in chronic diarrhoea—made from the pulp of the fresh, just-ripe fruit, freed from the seeds by passing through a coarse sieve as in confection of senna, and preserved with sugar. For the extract the fruits freshly imported whole would require to be used; the confection would be best prepared on the spot, and imported after the manner of tamarinds and chutneys.

*Ispaghula*: seeds of *Plantago ovata*.—These minute, boat-shaped seeds are imported from Persia. Contain no medicinal principle whatever, but are peculiarly successful as a remedy in diarrhoea and dysentery, and as an intestinal emollient in gastric catarrh. The simplicity of their action is such that no preparation can be suggested. One drachm of the cleaned seeds is infused for twenty minutes in 5 oz. of cold water, sweetened with sugar, and the resulting mucilaginous mass swallowed unstrained. The action is purely mechanical, the abundant, bland, adherent mucilage allaying the intestinal irritation. They are employed in the manner indicated by distinguished officers of the Indian Medical Service.

*Holarrhena antidysenterica*.—Kurchi: root-bark. This, perhaps, comes next to the bael in the estimation of European prescribers in India among the country medicines. The active principle is the alkaloid kurchine, and the properties are mildly astringent, antidysenteric, and febrifuge. Both a solid and a liquid extract are used, the latter the more desirable; a formula and process will be presented in the *Year-book*.

*Garcinia Mangostana*.—Mangosteen-rind: imported from Singapore. Contains tannin, resin, and a yellow crystallisable principle, mangostin. Used popularly like kino or catechu (not much prescribed) in the form of a syrup made by boiling the rind in water and adding sugar to the strained decoction. A better process is to make the syrup from a fluid extract.

*Carica Papaya*.—The importance of the papaya-fruit cannot be overestimated, and it may be given a place in the Addendum for the sake of the well-known papain as an alternative to pepsin, if only on the ground of caste prejudice. An elegant liquor papain, which is made from the fresh milky juice and preserved with glycerin, is also in vogue as a successful "vegetable pepsin." Its action is, of course, distinct from that of pepsin.

*Eugenia Jambolana*.—Jambul-seeds. If this drug has not fulfilled all that was claimed for it, it remains to be proved that it is not of use in the treatment of diabetes. All that need be said is that it is used by the people and prescribed by distinguished native physicians. The secret seems clearly to lie in making the aqueous liquid extract from fresh seeds from ripe fruit.

*Gynocardia odorata*.—Chaulmugra-seeds. The value of the expressed oil in eczema, psoriasis, and allied skin-affections is well known. It is regularly and largely prescribed for external use. A cream with equal parts of the oil, lanolin, and lime-water is a favourite form.

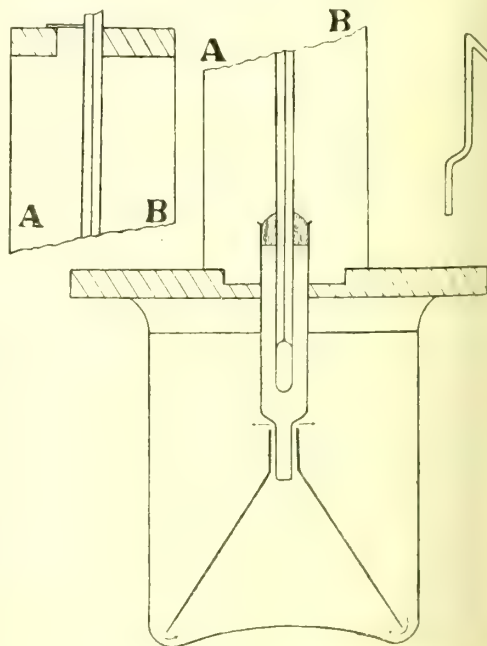
*Adhatoda vasica*.—Leaves. Used in pulmonary affections, and regarded as an internal antiseptic in phthisis. Contains a white crystalline alkaloid—vasicine—sparingly soluble in water, soluble in alcohol. The drug is strongly alkaline, due to the presence of potassium chloride. The only preparation prescribed is syrup. *vasak*, best made from a liquid extract.

In concluding, the author thanked Professor Wyndham R. Dunstan, F.R.S., for authentic specimens from the Imperial Institute collection; Mr. E. M. Holmes, F.L.S., for other specimens; and Mr. Fred Bascombe, F.I.C., of Messrs. Fletcher, Fletcher & Co., for pharmaceutical work done for the paper, details of which are reserved for the Conference *Year-book*.

## Determination of Correct Melting-points.

By THOMAS TYRER and ALBERT LEVY.

This paper was a continuation of the one communicated to the last meeting of the Conference, salicylic acid, salol, carbolic acid, menthol, and thymol being the substances tested, and the methods used were the B.P., Graebe's, Landolt's, Piccard's and Lowe's (as used then), as well as others, some of which are here illustrated:—



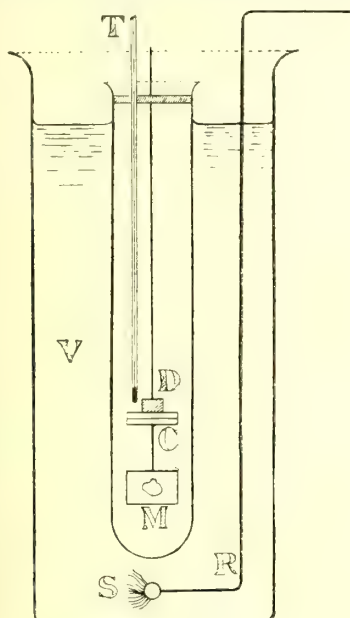
MILLS'S METHOD.\*

A bath nearly filled with oil of vitriol, in which a glass funnel is inserted, having on its lower edge six equidistant semicircular openings of about 5 mm. radius, and at the end of the neck other openings; a thin test-tube rests freely on the funnel containing a bath of paraffin oil, in which the thermometer-bulb is centrally placed. Against the bulb in a little tube is placed the substance, the melting-point of which is to be determined; the large bath is heated, regular convection takes place in the liquid, and the effect upon the thermometer is such as to cause mercury to rise with very great steadiness. This method gives good results.

\* *Proc. Roy. Soc.*, 33, page 204.



A wire rod is provided with a mirror, *M*, fixed at an angle of 35°, and two rings, one, *C*, which is fixed, and the other, *D*, which is movable and has an overlapping rim. Filter-paper\*



VANDEVYVER'S METHOD.†

clamped between the two rings, and a piece of the substance to be examined is placed on the paper; the rod is then fixed in a test-tube by means of a cork, which also supports a sensitive thermometer, *T*, so arranged that the bulb is close to the substance to be examined. The whole is then placed in a glass vessel, *V*, containing water, glycerin, or paraffin. *R* is a

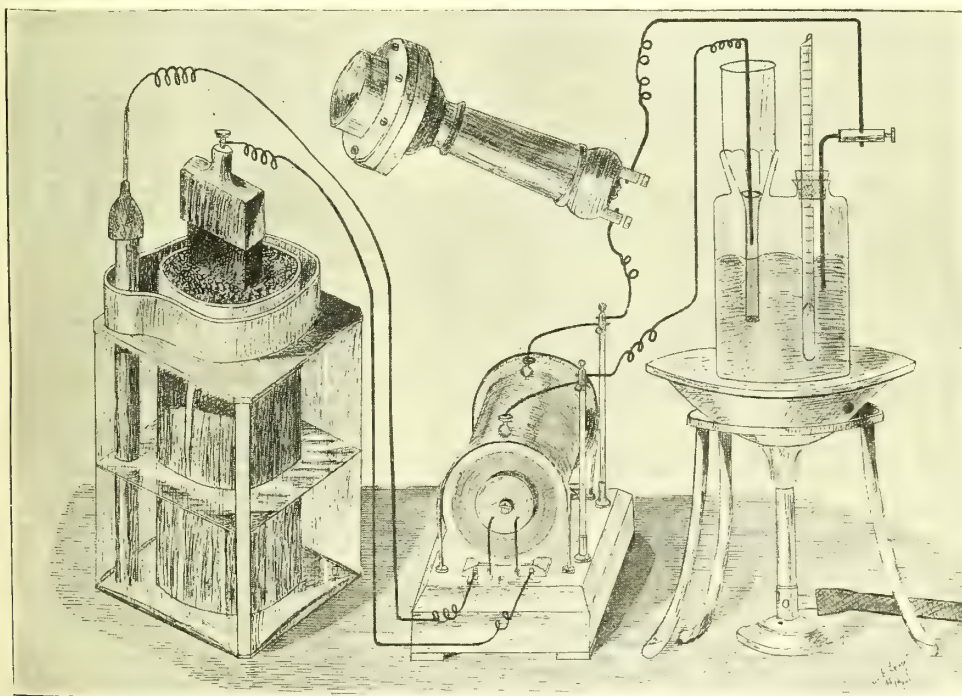
and carefully heated, and the melting-point determined by the reflection in the mirror of the stain produced on the paper by the substance on melting. If the substance produces a stain at the ordinary temperature on the paper, the latter is replaced by a dull glass disc. Substances which melt about the ordinary temperature are subjected to a preliminary cooling. With substances of very high melting-point, a metallic mirror is employed in place of the ordinary glass one.

#### ACOUSTICAL METHOD (figured below).

To prevent the possibility of delayed ringing by incipient electrolysis of the substance under examination by the electrical method an alternating current is used, and, as an indicator of contact, a telephone. This alternate current easily subdues a big resistance and cannot electrolyse the substance, because it is always changing its direction. A glass tube lodged in the mercury has an internal diameter of about 4 mm. In the end of this a small quantity of the powdered substance is pressed by means of a glass rod about 3½ mm. diameter; the height of the substance is, after pressing, about 1.5 mm. Over this substance pure mercury is poured to the height of about 20 to 30 mm. The apparatus consists of a small battery, a Ruhmkorff's coil, Chrysotomanos melting-beaker (instead of which an ordinary beaker may be used), and the telephone (in order not to complicate the drawing the commutator of the Ruhmkorff's coil is omitted). The substance which is heated in the mercury-bath having a large surface is uniformly heated. Should the substance liquefy in the centre first, contact is easily made with the mercury, and if the substance which is nearest the walls of the glass tube becomes liquid first, contact is prevented by adhesion and capillary attraction. The weight of the mercury is sufficient to subdue this force and makes immediate contact (the melting-point is also indicated by the falling of the mercury). As long as contact is made, the noise of the commutator can be distinctly noticed by the loud sound in the telephone. Results with this apparatus are satisfactory.

Other methods were also tried, and five of them giving the most constant results were used to provide the factors given in the last three lines of the table on page 172.

Remarking upon the results, the authors pointed out regarding salicylic acid that only the commercial acid stands the B.P. test, whilst the dried and purified acids agree with the melting-point required by the Dutch and Japanese



ACOUSTICAL METHOD DESIGNED BY MR. A. LEVY.

ster, which is provided with a brush, *S*, in order to remove bubbles from the sides of the vessel. The apparatus is slowly

Copying-paper, termed "patent stout buff," is best.

*Ann. Chem., Anal.*, 1898, 397, 399; *Chem. Centr.*, 1899, 1 (4), 242.

Pharmacopœias. The melting-points of commercial samples of carbolic acid show considerable differences when compared with dry or purified samples; only the purified samples stand the test required by the Pharmacopœia. The melting-point of pure synthetically-prepared (from benzol

sulphonic acid) carboic acid is between 42.5° to 43°, whilst an acid prepared from aniline by the diazo reaction melts between 41° and 42°. If a small part of the attention and

work. Where there was any doubt as to the authenticity of any drug Mr. Holmes examined the sample.

It will generally be agreed that when a new Pharmacopœia

| Pharmacopœias                                       | Salicylic Acid | Salol   | Carboic Acid                             | Menthol     | Thymol      |
|-----------------------------------------------------|----------------|---------|------------------------------------------|-------------|-------------|
| Austrian ... ..                                     | —              | —       | 37°-40°                                  | c. 42°      | —           |
| Belgian ... ..                                      | 158°           | —       | 41°                                      | —           | —           |
| British ... ..                                      | 156°-157°      | 42°-43° | 38-8°                                    | 42°-43°     | 43.3°-51.7° |
| Chilian ... ..                                      | 158°           | —       | 35°                                      | —           | —           |
| Danish ... ..                                       | c. 156°        | c. 42°  | Not under 38°                            | c. 43°      | 51°-52°     |
| Dutch ... ..                                        | c. 160°        | —       | 39°-42°                                  | —           | 50°         |
| French ... ..                                       | 158°           | —       | 42°                                      | —           | 44°         |
| German ... ..                                       | c. 157°        | 42°     | 40°-42°                                  | 43°         | 50°-51°     |
| Hungarian ... ..                                    | c. 160°        | —       | 35°-44°                                  | —           | 44°         |
| Italian ... ..                                      | c. 157°        | 42°-43° | c. 40°                                   | 42°-43°     | 50°-51°     |
| Japanese ... ..                                     | c. 160°        | —       | 38°                                      | 43°         | c. 50°      |
| Mexican ... ..                                      | 200°           | 42°     | 40°                                      | 30.5°-36.5° | —           |
| Norwegian ... ..                                    | c. 156°        | c. 42°  | c. 40°                                   | c. 43°      | 51°-52°     |
| Portuguese ... ..                                   | 158°           | —       | 35°                                      | —           | —           |
| Russian ... ..                                      | 157°           | 42°     | 40°-42°                                  | 43°         | 50°         |
| Spanish ... ..                                      | 156°           | —       | 35                                       | —           | 44°         |
| Swedish ... ..                                      | —              | —       | { Ord. 37°-40° }<br>{ Pure 40° } Swedish | —           | —           |
| Swiss ... ..                                        | 156°           | 42°-43° | 42°                                      | 43°         | 50°-51°     |
| United States ... ..                                | 156°-157°      | 42°-43° | Not under 35°                            | 43°         | 50°-51°     |
| Venezuelan ... ..                                   | —              | —       | 33°                                      | 43°         | 50°         |
| M.P. of commercial (average of five methods) ... .. | 157-44°        | 41-42°  | 36-93°                                   | 39-07°      | 46-21°      |
| M.P. of dried (average of five methods) ... ..      | 158-97°        | 41-58°  | 40-22°                                   | 41-61°      | 47-23°      |
| M.P. of purified (average of five methods) ... ..   | 159-75°        | 42-52°  | 40-45°                                   | 42-83°      | 50-07°      |

labour which is used in producing a synthetic acid was expended in the further purification of 40° commercial acid, as good, if not a purer article, could be produced direct from tar oils at very much lower cost.

Only dried and purified menthol agrees with the B.P. requirements. Menthol recognised in the B.P. may not be pure, since it is stated that crystals are usually more or less moist from adherent oil. The requirements of the German Pharmacopœia, however, are more stringent, and can only be met by a pure article having brittle crystals, and a melting-point of 43°. The wide limits of the B.P. for thymol make the melting-point for the commercial dried and purified product agree.

Before answering the question as to which of all known methods of taking melting-points is the best and most practicable, it must first be decided as to which of the following temperatures should be regarded as the true melting-point:—

1. The temperature at which liquefaction commences, which is usually considered as the melting-point on the Continent.
2. The temperature when the whole of the substance is in a liquid state.
3. The temperature which is adopted by the B.P.—namely, that temperature when the re-solidified substance becomes liquid again.
4. The temperature of re-solidification.

Some of the apparatus, of which at least twenty are published, were employed for one or the other of these temperatures. Some of these methods are very ingenious, and we trust to continue this investigation on pharmaceutical melting-points. It is obvious that no single method is applicable to all pharmaceutical substances.

### The Ash of B.P. Drugs.

By C. G. MOOR, M.A., F.I.C., and MARTIN PRIEST, A.I.C., F.C.S.

It may be new to many that considerable quantities of mineral matter are to be found in certain drugs, and in one or two cases the figures determined by the authors go to show that there should be some modification in the B.P. limits of ash—as, for instance, in cardamoms and colocynth pulp. A considerable number of the samples worked on were given to the authors by Mr. E. M. Holmes, and others were given by friends, or examined in the course of ordinary

is issued the ash-limits can be considerably extended, so that the greater the number of observations that can be collected, the better it will be; and the authors will be glad to receive from any analysts figures which they have obtained.

In the subjoined the figures represent percentages. The determinations are by the authors or by unnamed friends, unless where a name is given.

#### Acacie Gummi (B.P. limit 4.0)—

|                     |                         |                   |
|---------------------|-------------------------|-------------------|
| Soudan picked       | ... ..                  | 3.0-3.16          |
| Turkey              | ... ..                  | 3.2-3.4           |
| Mogadore            | ... ..                  | 3.7-4.0           |
| Senegal             | ... ..                  | 2.6, 2.8, and 3.1 |
| Turkey, medium bold | 3.85; small brown, 2.5. |                   |

*Aconiti Radix*.—4.7, 3.5, 3.8, 8.6, and 5.0. It appears that the ash of properly-washed roots should not exceed 5.6 per cent.

*Adeps Lanæ* (B.P. limit, 0.3).—0.09.

*Aloes Barbadosensis*.—1.7 to 2.2 (Umney), 2.6, 2.7, and 1.6.

*Aloes Socotrina*.—1.7 to 2.2 (Umney), 1.7 to 2.3 (Cribb), 4.1, and 2.6.

*Ammoniacum*.—Tears, 1.2 (Umney), 2.3, 2.0; quality (1), 1.6 and 2.1; (2) 5.6; (3) 15.4, 2.3, and 1.5. Dieterich suggests 10 per cent., which seems unnecessarily large.

*Anethi Fructus*.—7.7 (Cribb), 6.6 (Umney), 6.2 (Moor), 7.5.

*Anisi Fructus*.—Spanish, 8.1 (Umney); Russian, 6.9 (Umney), 4.9, 7.5 (Cribb), 3.6; Calcutta, 11.36.

*Anthemidis Flores*.—5.6 (Umney), 5.1 (Cribb), and 4.3.

*Araroba*.—9.8, 5.3, and 5.20 (Pearmain). Ash very variable but as the drug is judged by its yield of chrysarobin the ash figure is not very important.

*Arnica Rhizoma* (especially cleaned by beating).—9.2 (Umney), 6.2, 9.4, and 8.9. Other observations range from 12.1 to 3.3 which high ashes are due to earth mechanically enclosed.

*Asafetida* (B.P. limit, 10).—The ash in tears may be as low as 2 per cent., the average being about 5. Asafetida in mass varies greatly, some samples containing 60 per cent. For the present we suggest an ash-limit of 20 per cent.

*Aurantii Cortex Siccatus*.—5.6 to 6.5.

*Balsamum Tolutanum*.—0.65.

*Belladonna Radix*.—6.4, 8.1, 9.2, 7.2, 6.5 (T. Brewis), 7.3, and 7.5.

These roots, like aconite, should be carefully washed and dried. *Benzoinum*.—Sumatra, three qualities, 0.5, 0.8, and 1.0; Siam, 2.5, 0.28, and 0.82. The ash-figure in benzoin is not of much value, but the alcohol-solubility is of great importance, and a clearer definition than "almost entirely soluble" should be given. Possibly a benzoic-acid standard might be given.

*Buchu Folia*.—4.8 and 4.4.

*Columba Radix*.—4.3 (Umney), 5.1, 5.7, 7.4, and 7.8; powder, 11.8 and 10.3.

*Cambogia* (B.P. limit, 3.0).—0.84, 0.35 (Umney), and 0.75.



*Cannabis Indica*.—17.0 (Umney), 13.8.

*Contharis*.—5.7 (Umney), 7.4, 10.0, and 6.0. A limit of 7 per cent. suggested.

*Capsici Fructus* (B.P. limit, 6.0).—4.75, 4.6, and 6.8. *Capsicum nnum*.—6.6; genuine capsicums appear sometimes to give an ash over 6 per cent.

*Cardamomi Semina* (B.P. limit, 4.0):—

|                                  | Seeds | Husks | Whole Fruit |
|----------------------------------|-------|-------|-------------|
|                                  | 4.5   | 10.4  | —           |
|                                  | 5.7   | 8.8   | 8.2         |
|                                  | 3.7   | 8.8   | 5.4         |
|                                  | 5.1   | 10.5  | 7.7         |
|                                  | 5.1   | —     | —           |
|                                  | 3.7   | —     | —           |
| Mysore                           | 5.3   | 7.1   | —           |
| Wild Malabar, deficient in seeds | 6.1   | 10.9  | —           |
| Ceylon, short                    | 5.1   | 13.5  | —           |
| nest Ceylon                      | 4.16  | —     | 6.16        |
| Mysore, long                     | 4.27  | —     | —           |
| bleached                         | —     | —     | —           |

The B.P. limit is too high. The presence of powdered pericarps pulv. cardam. sem. can be detected in other ways.

*Carui Fructus* (B.P. limit, 8.0).—5.5 and 7.5.

*Caryophyllum* (B.P. limit, 7.0).—6.9 (average of 78), 4.8, 4.8, and 5.2.

(Squire), 5.4, 6.1, 5.2, 6.1, 6.0, 5.9, 5.2, and 5.2.

*Cascara Sagrada*.—4.6, 3.9, and 7.0.

*Cascarilla*.—8.8, 7.5; powdered, 10.7.

*Cassia Pulpa*.—11.3 (Umney); 5.1.

*Catechu* (B.P. limit, 5.0).—3.6, 4.0, and 4.4.

*Chirata*.—6.3 (Umney), 3.5 and 3.0.

*Chrysarobinum* (B.P. limit, 1.0).—0.25.

*Cimicifuga Rhizoma*.—7.1, 5.7, 7.0, 11.3 (Umney), and 5.6.

*Cinchona Rubra Cortex*.—2.3 (Squire), 2.35 (Lucas) and 4.0.

*Cinnamomi Cortex*.—4.3, 4.0, 3.4, 4.6, 4.8, 5.1, 4.4 (Squire);

average of 142, 5.54 (Raw); 4.0, 4.8, 3.0, 4.4, 5.0 (Dyer and

Clabard); 3.5-4.1 (Lucas); 4.1, 4.8, 4.6, 5.9, 5.5, and 4.7.

*Cocae Folia*.—6.3, 8.0, and 7.2.

*Coccus* (B.P. limit, 6.0).—3 samples over 40, 2 samples over 30,

3 samples over 20, 3 samples over 10, 6 samples over 4, 8 samples

under 4 (Merson); 30.8, 8.2, 5.2, 31.7, 7.8. The limit might be

reduced with advantage, and dressing with French chalk, &c.,

prohibited.

*Colchici Semina*.—5.1 and 2.6.

*Colchici Cormus*.—2.4 and 2.2.

*Polocynthis Pulpa* (B.P. not less than 9 per cent.).—6.7, 7.3,

7.1, and 8.6 obtained on pulp separated by the authors, the seeds

being carefully removed. The B.P. requirement is rather high.

It is difficult to obtain an ash free from carbon, and it would be

better to sulphate the ash.

*Conii Fructus*.—19.0 and 14.6.

*Coriander Fructus*.—5.8, 3 samples 4.7 to 5.7 (Squire); 3

samples powder 5.6 to 7.8 (Squire).

*Crocus* (B.P. limit, 7.0).—4.8, 5.0, 4.9, and 4.7; Alicante, 25.5.

The B.P. tests should be supplemented by the following:—"Every

fragment should, on contact with strong sulphuric acid, afford a

deep transient blue colour." Dyed fragments examined by us have

given a pink instead of the blue colour given by true saffron.

*Cubebe Fructus*.—7.3 and 5.3.

*Cusparia Cortex*.—6.7 and 6.2.

*Cusso*.—4.75.

*Digitalis Folia*.—8.1; pulv. 10.6.

*Flaterium*.—7.9.

*Ergota*.—3.5, 3.7, 3.5, and 5.7.

*Eucalypti Gummi*.—0.62.

*Eunymii Cortex*.—9.6.

*Filix Mas*.—4.9 and 6.2.

*Feniculi Fructus*.—12.1 and 8.7; 7.7-9.7 (Squire); pulv., 8.9-

1 (Squire). A limit of 12 per cent. suggested.

*Galbanum*.—6.6 and 7.2.

*Galla*.—2.3 and 1.3.

*Gelsemii Radix*.—2.1, 2.1, and 2.3.

*Geranium Radix*.—3.3, 4.0, and 2.9.

*Glycyrrhizae Radix*.—3.6.

*Guanati Cortex*.—5.5 and 4.3.

*Guaiaici Lignum*.—1.3.

*Guaiaici Resina*.—1.4. First quality, 1.3, second quality, 3.7,

third quality, 5.6.

*Lamatoeyli Lignum*.—2.1, 1.8, and 2.7.

*Lamameloidis Cortex*.—4.7, 5.0, and 5.1.

*Lamameloidis Folia*.—8.5, 5.1, and 4.6.

*Lemidesmi Radix*.—4.4.

*Lycyrrhizae Rhizoma*.—12.0, 8.6, and 4.7.

*Lycyrrhizae Folia*.—11.8 and 8.6.

*Peccacuanha Radix*.—3.2. A limit of 5 per cent. suggested.

*Peborandi Folia*.—6.0 and 8.1; pulv., 11.7.

*Plapa*.—4.0, 6.6, 6.2, 5.4, 4.8, and 4.2. *Ipomoea simulans*, 5.6.

*Pino*.—1.4.

*Krameria Radix*.—1.6.

*Limonis Cortex*.—4.9 and 5.3.

*Linum* (B.P. limit, 5.0).—Foreign, 3.6; English, 3.3 and 3.6.

*Lobelia*.—9.0.

*Lupulinum* (B.P. limit, 12).—15.6. Squire examined eight

samples; seven gave over 20 per cent. ash.

*Lupulus*.—10.8.

*Mezereon Cortex*.—3.1 and 3.0.

*Moschus* (B.P. limit, 8.0).

*Myristica Fragrans*.—2.4 and 2.1. "Nutmegs yield about

5 per cent. of ash" (Squire).

*Myrrha*.—No. 1 quality, 3.8 and 3.6; No. 2 quality, 9.9 and 4.2;

No. 3 quality, 17.0 and 3.2; sorted, 9.8; parv., 9.8; best, 3.8;

selected, 9.9; not marked, 9.0, 3.9, 4.6, 4.8, and 4.3. As in the

case of benzoin a minimum limit of alcohol solubility should be

fixed; also ash-limit.

*Nux Vomica*.—2.0.

*Papaveris Capsula*.—9.1.

*Pareira Radix* (Brava).—3.4, 3.6, and 3.5; (stem), 8.5, 5.4, and

2.7; (Bahia), 1.9 and 1.5; variety uncertain, 1.3 and 3.5, 6.2

(Caines), 3.7, 5.3, and 3.6.

*Physostigmatis Semina*.—3.9.

*Pimento*.—4.2.

*Piper Album*.—1.0 and 3.0; 4.0 (Raw) average of large number.

In author's opinion, too high.

*Piper Nigrum*.—5.0 and 7.0; 6.3 Raw, average of large

number; 4.0-6.0 (Squire).

*Pix Burgundica*.—0.2.

*Podophylli Rhizoma*.—2.9.

*Pruni Virg. Cortex*.—4.2, 4.0, 4.6, and 5.1.

*Pterocarpi Lignum*.—1.7.

*Pyrethri Radix*.—6.0, 5.3, and 4.9; pulvis, 18.5 and 17.5.

*Quassia Lignum*.—3.4.

*Quillaia Cortex*.—14.1 and 14.6.

*Rhei Radix*.—12.2 and 11.0. The ash is naturally very variable.

*Rhæados Petala*.—18.0.

*Rosæ Gallica Petala*.—2.8.

*Sarsa Radix*.—6.5.

*Sassafras Radix*.—0.64.

*Scammonia Radix*.—11.1.

*Scammonia Resina*.—6.1.

*Scammonium* (B.P. limit 3.0).

*Scilla*.—3.8, 2.8, and 2.9.

*Scoparii Cacumina*.—3.5.

*Senegae Radix*.—4.0, 3.1, and 4.6; pulvis, 24.0.

*Senna*.—5.6, (Alexandrian) 10.5, (Tinnevely) 10.4.

*Serpentaria Rhizoma*.—8.9, 30.7, 10.1, 13.4, 6.0, and 7.1;

pulv., 18.0 and 18.4. Like arnica, this drug often carries a

quantity of adherent earth.

*Sinapis*.—(Black) 4.0 to 6.0, (white) 5.0.

*Staphisagria Semina*.—26.0. This sample contained stones and

dirt. The ash of the cleaned sample was 14.0.

*Stramonii Folia*.—18.1 and 20.1.

*Stramonii Semina*.—3.0.

*Strophanthus Semina*.—10.8 and 3.8.

*Sumbul Radix*.—5.7.

*Tragacanth*.—2.9 (Caines), 4.9.

*Uve Ursi Folia*.—3.7.

*Valeriana Rhizoma*.—8.0, 8.6, 13.7, 15.1 and 19.5; pulvis, 29.0.

The ash of the cleaned rhizome will probably not exceed 9 per cent.,

any excess being adherent earthy matter.

*Zingiber*.—3.0, 5.0.

## Asafetida Præparata.

By HY. WILLIAMS JONES.

Having had occasion to prepare purified asafetida I tried alternate treatment with alcohol and water to separate earthy matter and other insoluble impurities of the gum-resin. As the recovery of the gum and resin involved evaporation of the solvents, and consequent loss of essential oil, I tried a method of precipitation. This gave the resins of the drug with by far the major portion of the essential oil, and eliminated the gummy portion. The sample submitted to the B.P.C. was prepared by heating 1 part of undried asafetida with 5 fluid parts of alcohol (90-per-cent.) in a closed jar on a water-bath, and solution effected by the aid of a little heat. The liquid portion was filtered off when cold and poured into ten times its bulk of water faintly acidulated with hydrochloric acid. After standing twenty-four hours the precipitated mass, consisting of resin and essential oil, was collected on a calico-filter, washed with water, scraped off into a shallow dish, and exposed to the air for a few days to allow of the evaporation of a small quantity of water appearing on the surface. The possible use of asafetida so prepared would be for pill-masses in place of the powder, and it might also be used for the easy preparation of the

tincture; in which case the use of rectified spirit in place of the weaker alcohol now ordered would, in my opinion, be a distinct advantage.

### Liq. Ferri Phosph. c. Quin. et Strych.

*Examination of Commercial Samples.*

By H. I. HENDERSON.

The introduction of *syrupus phosphatis cum quininâ et strychninâ* into the British Pharmacopœia has created a demand for a concentrated liquor for preparing the syrup. This liquor is usually four times stronger than the syrup, and should therefore contain 4.596 grammes of anhydrous alkaloids in 100 c.c. From the prescriber's point of view no



MR. HENDERSON.

legitimate objection can be taken to the use of these concentrated liquors in dispensing, provided the resulting syrup represents the official article, but the indiscriminate use of these concentrated preparations has a tendency to degrade the trade, and is responsible to a very great extent for the ignorance of so many candidates for the Minor examination. I have had occasion to prepare liquor ferri phosphatis cum quininâ

et strychninâ in considerable quantities from time to time, the retail trade, or a part of it, having created a demand which the wholesale houses very naturally do their best to supply. After some considerable experience I have no hesitation in asserting that a liquor which when diluted shall fairly represent the syrup of the Pharmacopœia cannot be prepared, but there is no reason why the syrup itself should not be prepared in the humblest pharmacy. The contents of the bottle of liquor either become perfectly solid, or an insoluble block of alkaloids surmounted by a red liquor half fills the bottle; the block cannot be dissolved by heating. As sent out some preparations are labelled "Liquor pro Syrup. Easton," and this departure from official nomenclature may lead to discussion in the future as to what ought to be dispensed when "Syr. Easton." is ordered in a prescription.

The method of analysis employed by the author was as follows: 5 c.c. of the liquor was measured into a stoppered glass separator, ammonia solution added to a strongly alkaloid reaction, and the alkaloids shaken out with chloroform. The chloroformic solutions were evaporated in a tared dish spontaneously, and the residues dried in the air-oven at 110° C.—an oversight for 120° C., but time prevented me from repeating the estimations. The allowance necessary was determined and deducted from each, so as to make the results equivalent to anhydrous quinine. The following are the results:—

| Sample | Gramme of<br>Total<br>Alkaloid in<br>100 c.c. | Remarks                                                              |
|--------|-----------------------------------------------|----------------------------------------------------------------------|
| 1      | 4.82                                          | Chlorides present; sulphates absent                                  |
| 2      | 1.30                                          | Chlorides absent; sulphates present                                  |
| 3      | 1.25                                          | Chlorides absent; sulphates present                                  |
| 4      | 3.91                                          | Chlorides absent; sulphates present;<br>alcohol present              |
| 5      | 4.88                                          | Chlorides present; sulphates absent                                  |
| 6      | 4.14                                          | Chlorides present; sulphates absent                                  |
| 7      | 3.76                                          | Chlorides absent; sulphates and glycerin<br>present; a syrupy liquid |
| 8      | 4.44                                          | Chlorides present; sulphates absent                                  |
| 9      | 3.65                                          | Chlorides present; sulphates absent                                  |
| 10     | 4.84                                          | Chlorides present; sulphates absent                                  |

All the samples which contained over 4 grammes of alkaloid in 100 c.c. gave unmistakable reactions for chlorides, show-

ing the probable substitution of the acid hydrochloride of quinine for the less soluble sulphate. Sample 4 differed from the others in that it contained alcohol in considerable quantity.

The results as a whole confirm the author in his impression that this liquor of 1 to 3 strength cannot be prepared.

### Turpentine Oil and Terebene.

By A. WERTHEIMER and C. T. TYRER.

Professor Armstrong nearly eighteen years ago remarked that American turpentine may contain a lævo-rotatory body which would account for variation in the optical characters of turpentine from different localities. The authors have, looked into the matter with the view of throwing light on the variability of terebene B.P., and distilled 62 lbs. in twenty-one fractions. They gave in detail the results of the experiment, stating percentage of distillate, sp. gr., optical rotation, and refractive index; suffice it to say that up to 162.5° C. the distillate (91.2 per cent. of the whole), was entirely dextrogyrate, and from 162.5° to 190° C. fractions were obtained (8.52 per cent.) which increased in lævo-rotation with the boiling-point—viz., from -0.8° to -10.3°. It follows that the presence of a lævo- and dextro-rotatory terpene in a dextro-rotatory bulk does not necessarily infer an admixture of French and American turpentine oils, as has been stated. The sp. gr. increases with decreasing dextro- and increasing lævo-rotation, as does the refractive index.

In order to ascertain which of the fractions, if any at all, would yield an optically-inactive product on treatment with sulphuric acid, the authors distilled 50 lbs. of the same American turpentine in fourteen fractions, the percentage, optical rotation, sp. gr., and refractive index being noted. An equal portion of each of the first eleven fractions was taken and treated with the same amount of sulphuric acid, under conditions of time, temperature, and addition as identical as possible. The same factors were determined. The results are best given in full (we omit the refractive indices):—

| Oil of Turpentine |           |         |           | Terebene |           |
|-------------------|-----------|---------|-----------|----------|-----------|
| Fraction.         | Per Cent. | Sp. Gr. | Opt. Rot. | Sp. Gr.  | Opt. Rot. |
| 97-158            | 1         | 0.8780  | +11.6     | 0.8813   | +10.2     |
| 158-160           | 13.6      | 0.8725  | +10.3     | 0.8997   | +9.8      |
| a. 160-160.1      | 12.5      | 0.8724  | +9.2      | 0.9025   | +7.9      |
| 160.1-160.5       | 11.56     | 0.8700  | +8.5      | 0.8743   | +6.7      |
| 160.5-161         | 15.25     | 0.8710  | +8.3      | 0.8753   | +5.8      |
| b. 161-162        | 17.9      | 0.8722  | +7        | 0.9092   | +5.3      |
| 162               | 4.25      | 0.8717  | +5.3      | 0.8759   | +5.3      |
| c. 162-163        | 3.56      | 0.8717  | +3.6      | 0.8735   | +1.6      |
| 163-164.5         | 4.75      | 0.8748  | +2.5      | 0.8758   | -0.4      |
| d. 164.5-168      | 4         | 0.8814  | +0        | 0.9046   | -2.1      |
| 168-172           | 1.1       | 0.9014  | -0.3      | 0.8979   | -3.7      |
| 172-175           | 0.375     | 0.8903  | -2.7      | —        | —         |
| 175-187           | 0.7       | 0.8965  | -6.1      | —        | —         |
| Residues.         | 2.4       | 0.9023  | —         | —        | —         |

The next step was to determine whether the 160.5-168° fraction was a mixture of - and +, so they were redistilled and the results, given in great detail, proved that optical inactivity was not obtainable. The experiments were repeated twice with the same results. The authors made a very complete critical examination of the literature of the subject, especially in regard to the characters of vari-



MR. C. T. TYRER.



penes existing in turpentine, and checked published statements.

With regard to the effect of keeping terebene, they do not find that the variations are very great; for example, a sample B.P. eighteen-months old gave an optical rotation of  $+2.1$ , another for the same period  $+3.4$ . These were in corked bottles three-quarters full. They kept samples in amber, blue, and green stoppered bottles, full and half-full, for six months in diffused light, and found no variation in the full, and not more than  $+0.4$  in the half-full bottles, so the colour of container, contrary to the statement of some observers, does not appear to have any effect.

The United States Dispensatory (18th edition) gives a method for producing terebene by acting on turpentine oil with  $\frac{1}{20}$  part of its weight of sulphuric acid. It is obvious, however, that as nearly every sample of turpentine oil has a different initial optical rotation, so more or less acid is necessary for each sample. A turpentine of very high rotation requires more acid, the operation is more prolonged, and, consequently, the product is not the same as regards the characteristics other than optical rotation.

It may be taken as a general rule the higher the initial rotation of the American turpentine oil the smaller the product of inactive mixture capable of steam-distillation, and the higher the sp. gr.

A sample of Russian turpentine oil, with an optical rotation of  $+31.6$  and sp. gr. 0.855, treated according to the directions in the United States Dispensatory, neutralised and distilled in a current of steam, gave an optical rotation of  $+29.7$ . After the addition of one-third its weight of sulphuric acid the rotation was  $+6.6$ , whilst a very small portion only of optically-inactive mixture was obtained on further treatment with sulphuric acid; the resulting products still retained their crude odour.

The authors have noted that when a considerable quantity of acid has been used on turpentine oil of high rotation, or when the temperature has accidentally risen, the residue from the steam distillate is whiter and much thicker than when only a small quantity of acid has been used. By continued action of sulphuric acid a product can be obtained of which only a small percentage is capable of steam-distillation, and the consistency of which is like that of honey. This compound does not dry in the air, even after the lapse of several months, and invariably contains, even after continued boiling with water, a considerable percentage of sulphur compounds. It is evident that the continued action of sulphuric acid under certain conditions may occasion very considerable polymerisation.

The general results agree with those of Power and Klier,\* that it is not possible to obtain any considerable amount of product having so low a boiling-point as that generally stated for terebene ( $150^{\circ}$ - $160^{\circ}$ ).

The authors then referred to the work of Garnett and Rynd and Armstrong, and proceeded to discuss the behaviour of French turpentine oil on the same lines as the preceding.

Compared with the yield from the American oil, that forced from the French gives a very small product on distillation with ordinary steam. Although the directions commonly given for making "terebene" (by acting on turpentine oil with sulphuric acid till optically inactive) are not feasible with American oil, with the French oil the conditions are possible, and much confusion would have been saved if the B.P. had given definite instructions as to what oil to use.

## Estimation of Chlorine and Nitrogen.

*New Apparatus.*

By J. F. TOCHER, F.I.C., F.C.S.

In the volumetric determination of red lead the author uses the apparatus described by Fresenius, consisting of a small flask fitted with a paraffin-soaked cork and connected to a bulb V-tube by means of a bent glass tube. As cork is objectionable, he has designed an apparatus which has no cork connectors, and which can be used in the estimation of nitrogen by the Kjeldahl method.

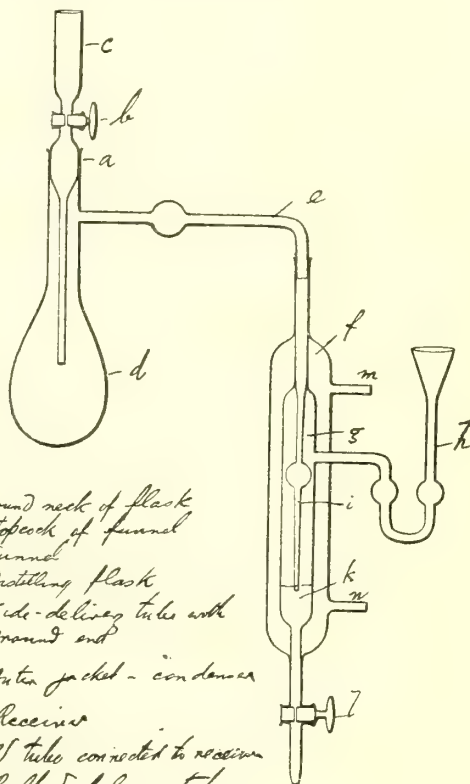
The apparatus consists of (1) a flask, and (2) a condenser-receiver. The flask is about 500 c.c. capacity, of hard glass, and is supplied with a stoppered-funnel ground at (a) to fit the flask. The side-delivery tube (e) has its extreme end bent at right angles and is ground to fit the upper part of the receiver, which is really a condenser and receiver combined. The outer jacket (f) has the outlet and inlet tubes (m n) for the supply of water. The inner space (g h) is the receiver, from the upper part of which hangs the bulb delivery-tube (i) connected direct with the side tube from flask as shown in the diagram.

The V-tube (k) passes through the outer jacket and into the receiver. The stopcock (l) is used to draw off the liquid in the receiver.

When the apparatus is in use the receiver is clamped in an upright position to a suitable stand and connected to the



MR. TOCHER.



- a Ground neck of flask
- b Stopcock of funnel
- c Funnel
- d Distilling flask
- e Side-delivery tube with ground end
- f Outer jacket - condenser
- g, k Receiver
- h V-tube connected to receiver
- i Bulbed delivery tube
- l Stopcock
- m, n Water connections

water-supply. A weighed quantity of the peroxide or other substance under examination is introduced into the flask and slightly moistened with water. A rotatory motion is given to the flask to ensure a uniform mass and to prevent caking. The flask is then fitted to the upper part of the receiver (by means of the ground end of the side tube), and is clamped to the stand. An excess of potassium-iodide solution is run into the receiver through the bulb delivery tube until it is sealed about  $\frac{1}{2}$ - $\frac{3}{4}$  inch. A small portion is also placed in the V-tube. The funnel is next fitted to the flask, and pure hydrochloric acid poured

\* Pharm. Rund. XII. No. 1, 1894.

into the upper part. A sufficient quantity is run into the flask, to which heat is now gently applied. When all the chlorine has been evolved there is usually a slight regurgitation of the potassium-iodide solution. This is checked when the level of the fluid reaches the point of the delivery tube, and air passes up and bubbles through the drawn-up iodide solution in the bulb into the flask, loss being thus entirely prevented. This arrangement disposes of the necessity of using magnesite recommended by Fresenius. Distillation is continued for a short time to catch the last traces of chlorine. The flask is then disconnected, and the fluid run out of the receiver through the stopcock (V) into a porcelain basin. The contents of the V-tube are syphoned into the receiver by the addition of water, a little being also run down through the delivery tube for the same purpose, and the washings run into the original fluid in the basin, which is now ready for titration.

In the estimation of nitrogen by the Kjeldahl method the nitrogenous substance can be decomposed in the flask with sulphuric acid, cupric acid (as recommended by Proctor and Turnbull, *J.S.C.I.*, 1900, 19, 130, 131), and potassic sulphate in the usual way. After cooling, and the subsequent addition of a little water, a little paraffin and some zinc filings are added, and the flask connected to the condensing-receiver containing a known quantity of normal sulphuric acid, a small portion of which is placed in V-tube. An excess of strong soda solution is next run into flask through the funnel. Owing to the presence of copper the proper quantity of soda to be added can be accurately gauged. Heat is now applied, and the operation completed when the acid is run out, the receiver washed thoroughly out through the V-tube, and the fluid titrated.

### The Pharmacopœia as a Standard.

By D. B. DOTT, Ph.C., F.I.C., F.R.S.E.

It is admitted on all hands that the British Pharmacopœia is the standard of strength and purity for all official medicines—*i.e.*, when the conditions and circumstances under which the medicine is dispensed imply that the pharma-



MR. DOTT.

copœial preparation is intended. That is probably all that the law intends; certainly all that it ought to intend. Whether the law is clear or not, the actual results of its administration are complete confusion. What with ill-informed prosecutors, inaccurate analysts, and rash judges, it is difficult to predicate what the result in any particular case may be. Examples were given to show that the B.P. is held to be binding only on chemists and doctors by some decisions; according to others it controls also grocers and publicans. Some judges will accept the plea that the article sold did not purport to be the B.P. preparation, and was just what the customer wanted; while others will have none of such a plea, but seem to regard it as an aggravation of the offence. No one would seek to defend a real adulterator, but one cannot but sympathise with the chemist who is brought into court and fined for what is, at worst, a trifling act of carelessness. In this connection attention was called to the fact that analysts often invent a standard where the B.P. does not give one. Although the B.P. gives a process for preparing camphorated oil, it does not give a test for its estimation, or even state its percentage strength. But the prosecution gets on just as well without. Although the vagaries of analysts have been to some extent checked by the reference to the Government Laboratory, there is nothing to control the over-zealous prosecutor or to rightly influence the minds of peculiarly-equipped judges. It was suggested that, as a means of attaining an intelligent and intelligible uniformity of practice, no such prosecutions as those in

question should be initiated without the previous consent of the Local Government Board or other central authority.

### Laboratory Notes.

By F. C. J. BIRD.

*Liquor Pancreatis*, B.P.—The test given is hardly as definite as it might be, and at times the point at which coagulation no longer occurs is rather difficult to determine. The amount of nitric acid added is not without importance. For example, taking 5 c.c. of fresh milk, the following effects were produced by varying quantities of nitric acid:—

- 1 minim, very fine curd, barely perceptible.
- 2 minims, coarser curd.
- 4 minims, increased coarseness.
- 6 minims, maximum coarseness.
- 8 minims, faint tinge of yellow.
- 12 minims, full yellow colour.

All settle on standing, leaving 10 per cent. of clear supernatant liquid. The test is rendered much more sensitive and definite by the use of ether with the nitric acid—5 c.c. of fresh milk shaken with 5 c.c. of 0.717 ether yields a white opaque liquid, which, on the addition of 5 minims of nitric acid, coagulates to a perfectly solid mass; 5 c.c. of milk which has been treated as directed in the B.P. with the prescribed quantity of liq. pancreatis of official strength, when shaken with an equal volume of 0.717 ether, furnishes a clear solution, the appearance of which is scarcely changed by the addition of 5 minims of nitric acid. Any coagulated casein will be found to rise as a layer between the liquid but in a sample of full B.P. strength the amount of separated curd should be infinitesimal. It is therefore suggested that the wording of the official test might be advantageously modified by the substitution after the words "for one hour of the following sentence:—"5 c.c. of the liquid shaken with an equal volume of 0.717 ether should form a clear solution, in which no coagulation should be produced on the addition of 5 minims of nitric acid."

*The Barium-chloride Test for Carbonate in Aromatic Spirit of Ammonia*.—The precipitate test first introduced in 1817 was generally accepted as accurate until Edmund Whittaker proved that its indications were delusive and untrustworthy. The test possesses the merits of simplicity and ease of application, and the following note is an attempt to render it sufficiently accurate to fulfil the purposes for which it is intended. The nature of the precipitate points to incomplete reaction, so advantage was taken of the property of chlorides of sodium and ammonium of throwing other substances out of solution. As a result, the following test was devised:—To 20 c.c. of aromatic spirit of ammonia add 5 grammes of ammonium chloride, agitating vigorously, and add 16 c.c. of solution of barium chloride. Warm to 160° F., cool, and filter. The filtrate, on the addition of more barium chloride and warming, gives no further precipitate. Should a slight opalescence be produced by the addition of barium chloride it should disappear completely on heating. Any precipitate of barium carbonate would remain precipitated under the circumstances; 21 c.c. of the spirit tested in this way yields a distinct precipitate on the further addition of barium chloride, which does not disappear on warming. The reaction appears to be quite complete at the time of filtering, and no further precipitate is obtained from the filtered liquid after standing twenty-four hours.

*Solubility of Pepsin in Alcohol*.—What is the solubility of pepsin, B.P., in 90-per-cent. alcohol? Allen (*Com. Organic Analysis*, 1898, vol. iv., 344) gives it as 1 part in 10 parts. The B.P. requires pepsin to be soluble in 100 parts of alcohol (90 per cent.); Squire says it is insoluble in alcohol (90 per cent.); and the U.S. Pharmacopœia states that pepsin is insoluble in alcohol. Certainly the bulk of the B.P. pepsin met with in commerce, although agreeing with the official requirements in point of digestive power, does not possess anything like the solubility indicated in the Pharmacopœia. The following are the solubilities in 90-per-cent. alcohol of three samples of pepsin, two of which were of full B.P. strength, and the third of very much higher digestive power. One part of pepsin was agitated with the 100 fluid parts of 90-per-



alcohol during four days, and the filtrate evaporated and dried to a constant weight:—

|       | Physical Appearance | Strength                 | Per cent. Dissolved by 100 vols. 90-per cent. Alcohol |
|-------|---------------------|--------------------------|-------------------------------------------------------|
| 1 ... | Transparent scales  | Full B.P.                | 37                                                    |
| 2 ... | Yellowish powder    | B.P.                     | 17                                                    |
| 3 ... | Nearly white powder | Much above B.P. strength | 29                                                    |

have never met with a sample of pepsin which would answer to the description of being "soluble in about 10 parts of alcohol (90 per cent.)," and in this particular official monograph appears to require amendment.

### Recovery of Waste Menthol.

By A. W. GERRARD, F.C.S.

Having in my possession 5 to 6 lbs. of impure menthol, the waste of some years of manufacture, I determined to attempt its recovery and purification. Two methods presented themselves for this purpose—viz. (1) Sublimation by heat; (2) Crystallisation from solvents. Surmising that recovery by sublimation would give the best result, that process was first submitted to trial. For conducting the operation a tinned-iron vessel was constructed with a big outlet on its dome, to which was attached a long wide stove-pipe bent at right angles, to act as a condenser. Into the above vessel the menthol was placed, and heat applied by means of a water-bath. The condenser was so arranged that a current of cool air could be passed over it. In my first experiment it was found if the water-bath were kept at boiling-point the menthol distilled and condensed in the stove-pipe as an oil, which, as it flowed onwards, set to a hard solid of not satisfactory appearance. Thinking the temperature of the water-bath was too high, it was now regulated to 140° F., at which temperature the distillation proceeded much more slowly, and the condenser in about eighteen hours became filled with a mass of beautiful silken filamentous crystals of exceeding softness and lightness—softer than the finest wool, and of high purity. This process, interesting as it was, proved much too slow to be of practical value, for so bulky was the menthol that it would have taken probably a week to recover a pound. I therefore relinquished this process and turned my attention to the method of recovery by crystallisation.

A preliminary 20 grammes of the menthol was dissolved respectively in 20 c.c. of benzine, petroleum ether, carbon bisulphide, methylated ether, and acetone. Each solution was filtered through paper into a porcelain capsule, and left to spontaneously evaporate. In a period varying from twelve to twenty-four hours all the solutions had deposited an abundance of crystals; these were drained from a small quantity of mother liquor and air-dried for several hours. The menthol crystals obtained in each case were very beautiful and almost colourless, a second crystallisation rendering them quite pure. All the solvents except ether left a residue of colour attached to the menthol which required two or three days of air-exposure for removal. In the case of ether however, a few hours' exposure was sufficient to volatilise all traces of foreign odour, and left the menthol in a high state of purity.

The above experiment having proved satisfactory, the bulk of the menthol was dissolved in half its weight of ether, filtered and crystallised; the crystals drained from the mother-liquor were again dissolved in half their weight of ether, and again crystallised; on drying, the menthol was obtained in the beautiful colourless crystals characteristic of the substance. As 1 lb. of ether is ample for the two crystallisations of 1 lb. of menthol the process was economical and yielded a very pure product.

### Some Pharmaceutical and Economic Plants of Jamaica.

By THEO. H. WARDLEWORTH, F.L.S.

The writer recently visited Jamaica and submitted the following comments on some leading pharmaceutical and

economic products of the island. He thanked the Director of Public Gardens and Plantations in Jamaica (Hon. William Fawcett, B.Sc., F.L.S.) for the specimens and photographs



MR. WARDLEWORTH.



MR. FAWCETT.

shown, and for his kindness during the writer's visit to the Island of Springs.

*Anatto.* *Bixa Orellana* grows freely in different parts of the island, and were it not for the introduction of aniline dyes would provide a contribution to the revenue of Jamaica. At present little or no system seems to be adopted in its cultivation and collection by the peasant.

*Kola.*—*Sterculia acuminata* grows freely, and the product is of first-class quality, but it does not seem to compete successfully with the African variety, probably on account of the greater cost of production.

*Coca.*—*Erythroxylon coca* can be grown in the island successfully, but apparently has not reached the commercial stage so far.

*Oranges* (*Citrus aurantium*, *Citrus vulgaris*, &c.).—The climate of Jamaica is admirably suited for the growth of all descriptions of oranges, and were it not for the present regulation of the B.P. enforcing the making of tincture from fresh peel it might be possible for Jamaica to produce an unlimited supply of orange-peel of excellent quality. It is to be feared that the present price obtainable for good peel would hardly call much attention to this article as a product worthy of cultivation.

*Essential Oil of Limes* is produced freely in different parts of the island, chiefly during the process of concentrating lime-juice for citric-acid manufacture.

*Jamaica Dogwood* (*Piscidia erythrina*).—Some years ago the writer's attention was called to a parcel of dogwood-bark said to be from the root of the *Piscidia Erythrina*, as it contained a large amount of chlorophyll, and was evidently bark taken from the ascending axis of the tree. He endeavoured to find out whether it was really taken from roots which might have been partly exposed to the air and light, but in this he was not successful. During his recent visit he found as the result of inquiries that a very large quantity of bark from the trunks of the trees had been shipped, as the collectors were not aware at the time that the root-bark was required, and this probably explains the presence of chlorophyll in the parcel in question. He found that the proportion of root-bark exposed by the *Piscidia Erythrina* was very small indeed, and would only allow of a very small percentage in any parcel of the root-bark.

*Cowhage* (*Mucuna pruriens*) grows freely all over the island, and can be produced in quantity, but the natives seem to possess an unusual dread of this drug. The peasant when asked to clear a piece of bush in which cowhage may be growing is willing to do so if allowed to burn the bush, but not otherwise.

*Balsams of Peru and Tolu* trees grow freely in the island, but apparently the balsams are not produced commercially.

*Pimento* (*Pimento officinalis*) is peculiarly a Jamaican tree. Efforts have been made to grow it in other islands in the West Indies, but without success. A grove of pimento-trees is an interesting sight to the novice. The bark peels off every year in thin quills, leaving the fresh bark of light-cinnamon colour, giving the impression that the tree has been freshly peeled. The gathering of the berries is commenced as soon as the first berry in the bunch has ripened, and a peculiar feature of the collection is that each bunch has to be broken off, and not cut. If the branch be cut with a knife it will die down for some considerable distance after the operation; if broken by the hand the wound heals with little or no loss, and the tree bears well again the following year. The berries are carried to a barbecue, and there allowed to ripen and dry in the sun. The odour round a pimento planter's house during the "season" is almost overpowering.

*Papaw.*—*Carica Papaya* grows well in all parts of the island, and papain could be made in almost any quantity should sufficient demand arise.

*Colocynth.*—Efforts are being made to grow this as the plant flourishes well, but the natives so far lack the necessary skill in



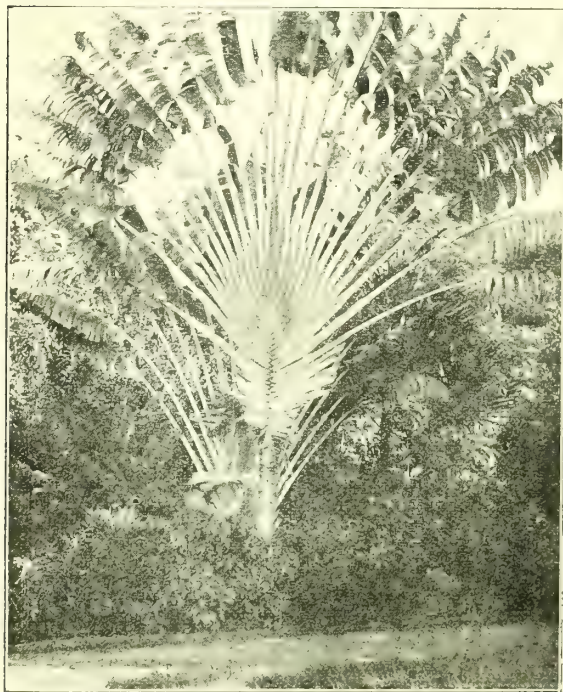
preparing it for the market. The Director-General is still devoting attention to the matter, and it is possible that before long Jamaican colocynth may be an article of commerce.

*Ipecacuanha (Cephaelis Ipecacuanha).*—An effort is now being made at the Castleton Gardens and at the Hope Gardens in Jamaica to grow Brazilian ipecacuanha from seed.

*Cinchona* has been cultivated in Jamaica for some years past on the slopes of the Blue Mountains, on the ridges rising from 3,000 feet to 6,000 feet. While the cinchona plantations have accomplished the aim of its founder, Sir J. P. Grant, like many other things it has fallen upon evil times, and in 1887 ceased to be a commercial asset, as the fall in the value of quinine reduced their profits to such an extent that it did not pay to work. The recent rise in the price of the alkaloids has drawn fresh attention to this effort of the Jamaicans, and during the past year the Director of the Public Gardens has tried to draw the attention of quinine-makers to the resources of the island in this respect; but the difficulty and expense of establishing a quinine-factory on the spot after the model of the Java factory is not warranted by the quantity of cinchona available. There are only a little over 22,000 trees, and the yield of bark per annum is about 120,000 lbs., which is only about one-thousandth part of the world's consumption. It is therefore to be feared that unless the bark can be profitably stripped, dried, and exported that this feature will have to remain idle for many years.

*Olives (Olea europaea).*—It has been found impossible to grow the olive-tree successfully in Jamaica. The tree itself flourishes well, but bears no fruit. This is apparently due to lack of rest.

*Lemon-grass Oil and Ginger-grass Oil.*—The plants which yield these are being experimentally grown in the Hope Gardens, and seem to be flourishing well in their new surroundings.



THE TRAVELLERS' TREE (*Ravenala madagascariensis*).

Sir Henry Blake, G.C.M.G., Governor of Jamaica, drawing a refreshing draught of water.

*Camphor.*—An effort is being made to introduce the cultivation of *Cinnamomum Camphora*, and this is an experiment which will be watched with interest.

*Castor-oil Plant.*—*Ricinus communis* flourishes with little or no attention, and is to be found growing wild in many parts of the island. The oil could, no doubt, be produced commercially if sufficient inducement were offered.

*Cardamoms.*—*Elettaria Cardamomum* is grown, but not systematically. The plant evidently would do well in many parts of the island.

*Ginger (Zingiber officinale).*—The Jamaica ginger is of admittedly superior quality, and a great deal of attention is now being paid to its cultivation, chiefly by small colonies of Germans, who are introducing improved methods in its growth and preparation. It used to be said by the planters and natives that it was a very exhausting crop, and could not be grown repeatedly on the same

soil. This led to its being grown on virgin soil as far as possible, and when the plantation had been exhausted fresh ground was broken up, and the old fields were entirely neglected. To such an extent has this system been adopted that in a large number of instances the fields were at a great distance from the dwellings attached to the primary plantation. The German method of cultivation is "intense," and by the adoption of a suitable fertiliser very satisfactory results are obtained from the same fields year after year.

*Vanilla.*—Considerable attention has been devoted to the cultivation of the vanilla orchid in Jamaica by Mr. Fawcett, and



BANANA-TREES.

the writer was privileged to see some exceptionally fine pods which had been grown and cured in the Hope Botanical Gardens. The director of plantations is distributing a large number of vanilla-plants among suitable locations in the island, and in the course of a few years Jamaican vanilla may become an important factor in the vanilla yield of the world.

*Areca Catechu* grows freely in suitable parts of the island, and in connection with this palm the writer was able to set another question at rest. Some years ago a parcel of split areca-nuts was offered on the London market. The quality was very unsatisfactory, and yielded a very poor powder. Upon examination the writer was satisfied that they had been allowed to lie upon the ground until they had germinated and commenced to grow but this could only be a theory. While in the Castleton Garden he was fortunate enough to find a large number of the areca-nut at the base of one of the palms. They had sprouted, and the young palms had grown to the height of several inches. The were taken up and examined carefully, and the cotyledons exhibited all the characteristics of the so called split arecas which had been offered on the London market.

*Cocconut butter.*—A German showed the writer some specimen of a remarkably fine butter which he had manufactured from the oil of the cocconut-tree. It was said to be very easily digested by persons of weak digestive powers, and was an excellent substitute for lard in the making of ointments. It kept well, and did not readily go rancid. He was exceedingly anxious to bring it under the notice of pharmacists and others to whom it might be useful.

*Sarsaparilla.*—*Smilax officinalis* naturally claims special attention, but upon this point very little can be said, as the plant did not come specially under the writer's notice. To throw some light upon this point a short excursion was made into the bush in order to find, if possible, some native sarsaparilla, but the search was not successful. One small plant was found, but it was not flower. The roots seem to be gathered by the negroes in small parcels, and sold to the merchants from time to time, but no special effort seems to be made for its cultivation.

The impression produced upon the writer by his visit to Jamaica was that in view of the present struggling condition of our West Indian colonies it was desirable that the attention of pharmacists should be drawn to our own colonies as a source from which to draw their supplies of drugs more freely than is at present the case. With some slight means of encouragement it would be possible to draw supplies of many drugs which at present come from other parts of the world in which the Mother Country has little or no interest, and it is to be hoped that in the course of a few years the wise and energetic efforts of the directors of the various botanical stations may be crowned with abundant success.



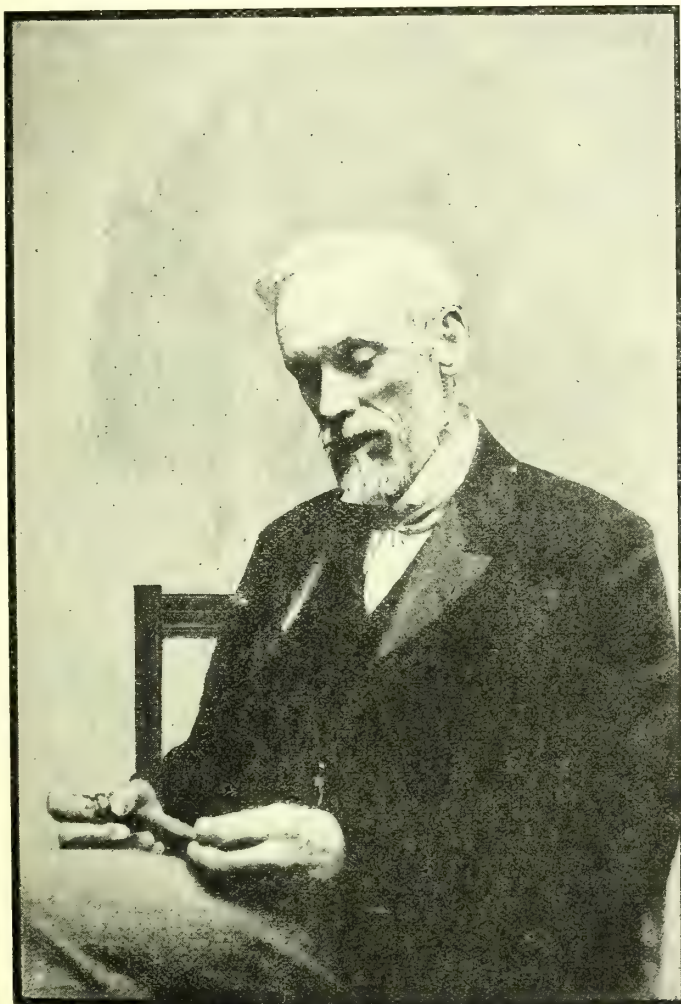
## The Presidential Address to the Conference.

By E. M. HOLMES, F.L.S., Pharmaceutical Chemist.

LADIES AND GENTLEMEN,—The selection of a subject for address to the members of so scientific a body as the British Pharmaceutical Conference has doubtless been a matter of painful consideration to the wiser men who have preceded me in this chair. The history of pharmacy has already been told. The most recent discoveries of science—chemical, physical and pharmaceutical—are annually recorded in the *Year-book of Pharmacy*. Even in the subjects of botany and materia medica there can be nothing new to bring before you that enterprising journals have not already

provided for critical readers. But the closing year of the century seems to be the appropriate time for reviewing the progress of science, so far as it affects pharmacy, and for striving to obtain some idea of the changes that have been brought about during the period. It is only by comparing the beginning and the end of the century that we can realise how vast those changes have been. At the beginning of the century chemistry had made but little advance. The metals of the alkalis and alkaline earths, such as sodium, magnesium, aluminium, and many other metals, such as nickel, tungsten, and uranium, which are now articles of commerce, sold by the hundredweight or ton, had not even been discovered. To-day, magnesium is used in fireworks, uranium and cobalt in glass manufacture, nickel and tungsten in the armour-plates of warships, and aluminium bids fair to rival zinc and copper in usefulness. Not a single active principle has been extracted from plants; morphine, strychnine, quinine, and cocaine, the manufacture of which is to-day conducted on a very large scale, were then absolutely unknown. Chloroform, chloral, glycerin, carbolic acid, and many articles the names of which are now household words, had not been discovered. Electricity was in its infancy, and was not dreamt of as a power that would, when chained to man's service, revolutionise the world of science. Surgical operations that would not have been thought possible in the beginning of the century, and that fifty years ago were almost invariably fatal, are now performed without pain and with very trifling risk by the aid of antiseptics and anaesthetics. Virulent diseases that formerly decimated the population, such as cholera, plague, and diphtheria, are now regarded as within the range of successful treatment by antitoxins and specially-prepared serums. Travelling has increased in speed from that of the stage

coach to steam or electric traction at forty to sixty miles an hour, whilst 200 miles an hour has been considered within the range of possibility, and to-day submarine ships and aerial vessels are accomplished facts. The civilised parts of the globe have been covered with a network of railways. London is tunnelled underneath like a rabbit-warren with railway-lines, and covered overhead with a cobweb of telegraph and telephone wires. Men in one warehouse can talk with others at a distance that has not yet found a limit, the very tones of the voice can be locked up in paper and produced at will, so that the phrase, "he being dead, yet speaketh," has a new signification. Messages can be sent through the air by the aid of electricity without the aid of intervening wires, and without being detected until they reach their destination. Heat, powerful enough to volatilise the most refractory metals and to form gems, has been obtained by the use of the electric furnace, and the absolute zero of cold has almost been reached by the solidification of hydrogen. The spectroscope has revealed the chemical constituents of other worlds and new elements in this one. Rays of light, hitherto invisible, have been utilised in surgery and dentistry and skin-diseases. In botany the microscope has revealed that bacteria, or plants of the lowest organisation and the most minute size, are the cause of zymotic diseases. A practical use has been made of the disintegrating powers of those minute plants in the purification of sewage by their means, in improving the land by the nitrifying properties of some species, and in the destruction of animal pests by infecting them with the spores of others.



MR. EDWARD MORELL HOLMES, F.L.S.

But the great characteristic of the century is that the rate of progress in science has been far more rapid than in any previous one known to the human race. The enormously developed powers of locomotion and facilities for inter-communication have naturally had an effect on commerce, and, together with the increase of population, have brought three apparent evils in their train—viz., centralisation, competition, and co-operation, all of which affect pharmacy no less than other professions and trades.

### THE PROGRESS OF PHARMACY DURING THE CENTURY.

At the commencement of the century chemists and druggists had just begun to separate into a distinct body from grocers and general dealers. But it was not until 1842,



when they obtained a Royal Charter of Incorporation, that they began to assume the character of an educated body. As the semi-professional character of the business became recognised, in consequence of the examination and education that chemists were compelled to undergo, the number of young men entering it gradually increased. These were and are still drawn largely from respectable families with small incomes, who, misled by the small amount of capital necessary to start a business, and the reputed large profits, do not recognise that the returns are usually so small that the grocer and draper can make eight or ten times more money, even on small profits, than a chemist is able to do. Nor is it generally recognised that the business depends far more than in any other trade on the personal integrity of the proprietor, and that it takes time to acquire the confidence of the public. The fact that the keen financial instincts of the Jews have never led them to embark in pharmacy might have served to indicate to the general public that the business of the chemist and druggist is not so lucrative as is generally supposed. The wills of pharmacists never present large figures, and millionaires are unknown in British pharmacy. Nevertheless, the supply of dispensers of medicine has exceeded the public demand. The principle of free trade has prevented such a limitation of the number of those engaged in pharmacy as is prevalent in some other countries, with the result that, like all other trades and professions in this country, its ranks are overcrowded. At the present time there are about 15,600 registered chemists and druggists, of whom it is estimated that about one-tenth only, whom for convenience we will call pharmacists, actually derive their principal income from the dispensing of prescriptions, a small number from what is known as counter-prescribing, and the remainder from light retail and dispensing business, the dispensing being a comparatively small proportion. In some parts of the country, especially in Scotland, there is a much larger proportion of pharmacists who dispense medicine than in England. Even in different parts of England, in some towns the medical men almost invariably dispense their own medicines, whilst in other towns a few miles distant the dispensing is done almost entirely by pharmacists for the medical men. The cause of these local differences seems worthy of an investigation, which might lead to greater uniformity of practice. There is little doubt, as was pointed out last autumn by Dr. Leech (whose premature decease we all deplore) that the practice of pharmacy by doctors is not only an evil to the pharmacist, but a disadvantage to the medical men themselves, and that medical men would gain if, wherever possible, they gave up dispensing. It is obviously for the safety of the public that every dispenser of medicine, whether employed by a pharmacist, by co-operative stores, or by a medical practitioner, should have passed a qualifying examination in the art of dispensing medicines, and that every medical man who dispenses his own medicine should have passed the same examination in the subject as the pharmacist whose duties he takes upon himself. But under the modern system the medical student, although he has the opportunity of taking up a course of pharmacy at a hospital or medical school, is often not very conversant with the subject. The safety of the public is best secured when the dispensing of prescriptions is checked by a second or third qualified dispenser, as is the case in dispensing establishments where several assistants are kept.

In respect of poisons the public especially needs protection, inasmuch as it does not know their properties nor their antidotes, and the chemist and druggist—as being familiar with both—and therefore capable of devising suitable precautions to safeguard their use and to give advice in cases of accidental or other wrongful uses of them—is obviously the fittest person to sell them, whilst it is probably largely due to his lack of energy and want of business enterprise that the poisonous articles used in the arts, and for sanitary or insecticidal and horticultural purposes, have not always passed through his hands.

There is another direction in which the safety of the public is likely to be affected. Drugs vary exceedingly in quality. In order to sell cheaply at a working profit, it is necessary to buy cheaply. As prices are lowered by co-operative stores the tendency will therefore be to buy inferior qualities to meet the demand for low prices. An instance of this has

recently come before us in which, owing to the use of an impure and therefore cheaper sulphuric acid by the large manufacturer, the arsenic it contains found its way into a medicinal preparation of sodium phosphate. Pure sulphuric acid, which is more expensive, being that which should have been used, is free from arsenic. In the case of drugs used in medicine this will probably often lead to serious results, since when medicine is required to act quickly and effectively, as in croup or parturition, &c., if the ipecacuanha or ergot be of inferior quality serious danger to life may result through their want of activity. In Russia, Germany, Scandinavia, and Greece this difficulty is met by a legalised tariff for dispensed medicines. In this country it is left to the public themselves to judge by the price of the medicine and the personal character of the seller whether they obtain the best quality of drugs or not. The public, however, need to be instructed that the British Pharmacopœia upholds a high standard of purity in medicine, and the importance of asking for B.P. preparations might well be taught to the laity by the wider use of these two letters on ordinary labels.

It has been stated by medical men that counter-prescribing is one of the reasons why dispensing is not entirely handed over to pharmacists by the medical profession. The subject is no doubt surrounded with practical difficulties, but probably these are not insuperable. There is no law to prevent a man, however ignorant he may be, from prescribing remedies for himself, his friends, or his household, and it has been stated on high medical authority that it would not be objectionable for persons to apply at a pharmacy "for simple remedies for toothache, muscular pain, or trifling dyspeptic ailments, provided the person seeking relief knew what he was about, and was not deceived by the assumption of an authority, or of titles, on the part of the chemist, and provided that such relief was merely to be regarded as first aid, or a temporary expedient" for a definite complaint stated by the patient.

But this is a very different state of things from what is known as a prescribing business, in which the chemist goes beyond his province in diagnosing disease and supplying remedies for it. In such business the straightforward plan would be for the proprietor to qualify as a medical practitioner, or to arrange with a properly-qualified man to see his clients. The converse of this is the medical practitioner who keeps open shop like a chemist, and to whom is largely due the difficulty that the uneducated public find in distinguishing between a chemist's and a doctor's shop. It might be possible, perhaps, for representatives of the medical profession and the Pharmaceutical Society to arrange a Conference to make mutual provisions for counter-prescribing by chemists to cease on the one hand, and the keeping open shop by doctors on the other. This would need disciplinary powers for both bodies to deal with offenders, but the two bodies united could probably, by a good organisation, bring sufficient influence to bear upon the Government to pass an Act authorising such powers.

The real difficulty for the conscientious pharmacist lies in the impossibility of ascertaining whether the case, very often that of an absent person, comes within the limits of first-aid or temporary expedients. This difficulty would probably be met most satisfactorily if a small official were issued by the General Medical Council, or by Government authority, to the general public, indicating on general lines the premonitory symptoms of dangerous or zymotic diseases, such as would distinguish, for instance, an ordinary cold from incipient pneumonia, or a sore throat from approaching diphtheria or scarlet fever. Such a working possession of the heads of families, and on the desk of every chemist, might serve to indicate both to the public and the pharmacist a dividing line between first aid and the necessity of medical treatment and supervision. Another difficulty lies in the fact that in small villages where there is no chemist and no carrier, it is difficult for the doctor to send for dispensing. Here, however, is the opportunity of the enterprising chemist in the nearest town to see that the medical man has a portable outfit, which he can carry with him in his hands. The advantage of such portable medicine cabinets in country villages, and for travellers, has already been recognised by enterprising London firms, which have adopted and enlarged upon the hint given by Brockton's compressed potassium bicarbonate of fifty years ago.

The increase in the rapidity of travelling, and the ab-



an international Pharmacopœia has caused a demand for portable medicines, which has been increased by the opening of new countries where it is impossible to obtain medicine, that a new industry in this direction has been developed, which English pharmacists, with characteristic conservatism, have allowed Americans to take the lead. The great advantage in the saving of time by the use of portable medicines to both the medical practitioner and the patient—country districts where there is no chemist within several miles, and where the considerable delay in the delivery of medicine, by reason of the distance, is often of serious importance—is almost certain to lead to the permanent adoption of such time and labour saving devices. The value of the public of portable medicines for travelling purposes cannot be denied, as well as to the Government, since in military and naval operations the sudden demands made upon medical and surgical appliances necessitate the use of drugs and preparations occupying as little space as possible, in a form as concentrated as is compatible with safety, and not readily affected by the vicissitudes of climate. This form of medicine has, therefore, become a feature of the pharmacy of to-day, and is likely to develop still further. It is, however, the disadvantage of placing in the hands of the laity powerful remedies which they are apt to use without proper medical advice, and without the ability to judge of the nature of the disease for which they employ them.

The vast number of new vegetable, chemical, and animal remedies introduced during recent years, and the impossibility of keeping pace with them on the part of the medical man and the pharmacist—especially in the provinces, where, as a rule, new remedies do not come into use until two or three years after introduction into city practice—has led to the comparative disuse of the Pharmacopœia for prescribing purposes, and to more dependence being placed by physicians, concerning new remedies, upon such works as Martindale's "Extra Pharmacopœia" and Squire's "Companion to the British Pharmacopœia"—works which enterprising pharmacists have produced to meet the necessities of medicine in all pharmacy during the time that elapses between the publication of one Pharmacopœia and another. These works have also the additional advantage that they contain tables of diseases, and of all the most modern remedies used for them, as well as the doses and formulæ showing useful combinations of the various preparations.

In these rapidly-progressive times the Pharmacopœia cannot, even if published decennially, be actually up to date; it can only crystallise into a definite shape formulæ that have already been in use for some time. The Pharmacopœia is now really more used by pharmacists as a standard for ensuring uniformity in official preparations than by physicians for prescribing purposes. It is only just, therefore, that pharmacists as a body should have an influential voice in its construction, especially as they have shown, by publication of numerous formulæ that have been accepted in the previous Pharmacopœias, that they are quite capable of devising approved formulæ. The medical profession must, of course, necessarily determine what remedies and preparations shall be included in it for their convenience.

#### THE PHARMACOPŒIA AS A LEGAL STANDARD.

Any vexatious prosecutions of chemists have resulted from the fact that the British Pharmacopœia has been erroneously supposed by many analysts to be a legal standard for the purity of drugs. The statement in the Pharmacopœia that the work is "intended to afford to the members of the medical profession, and those engaged in the preparation of medicines throughout the British Empire, one uniform standard and guide, whereby the nature and composition of substances to be used in medicine may be ascertained and determined," in no way indicates that it is to be used as the legal standard of purity for drugs used in commerce for domestic and technical purposes. To prosecute chemists because, for instance, tincture of myrrh, which is used as a dentifrice rather than as a medicine, or benzoin, which is used in French polish, &c., or soft soap, or ammonium carbonate, soda water, or other articles in regular household use, do not answer to the tests of purity of the B.P., would constitute an interference with trade that would be as absurd as it would be vexatious. That the standard of purity used in dispensing physicians' prescriptions should be as high as it is possible to make it is an article of faith of the B.P.C.,

but there are many cases in which drugs and preparations which are B.P. articles are used for other than medical purposes, and for such the average of normal condition of purity meets all the requirements of the case. There is, therefore, a need for a published standard of normal or average purity of drugs for this purpose, until such time as the Government realises its duty to publish a legal standard, by which the provisions of the Sale of Food and Drugs Act can be effectively and justly carried out. In the absence of any definite Government standard of drugs, this is a work which analysts in conjunction with pharmacists should take up, and one that the Conference should support, in the interests both of the public and of chemists themselves.

There appear to have been several causes that led to the erroneous supposition that the B.P. is a legal standard for the purity of drugs. One is the misleading use of synonyms in the B.P. The names of commercial products in several cases in which they differ considerably in composition from the official article are given as synonyms, such as "milk of sulphur" for *Sulphur præcipitatum* and "soft soap" for *Sapo mollis*. Such synonyms are misleading, and serve no useful purpose, since medical practitioners never use them in their prescriptions, and they might well be omitted. Another cause that leads to unjust prosecution is due, apparently, to the ignorance that exists amongst analysts who are not also pharmaceutical chemists concerning the rapid changes that many vegetable and other preparations undergo when kept in stock. Indeed, it would be a considerable advantage to both analysts and the public if the former were required to pass the Major examination of the Pharmaceutical Society before going in for the more stringent chemical examination of the F.I.C., since a knowledge of the physical and histological character of crude drugs is practically essential to the accurate determination of their purity or otherwise.

It may here be remarked that a fear lest the B.P. might be used as a legal standard seems to have had a deteriorating influence on its construction, having apparently led in some cases, such as those of myrrh and aloes, to a lowering of the limits of purity, so that it is possible for very inferior qualities of the same drug to be sold and still meet the B.P. requirements. Such latitude is deplorable, since it leads to unfair competition, and affords no security to the public that they get the article they want when they desire that their medicines—for instance, compound liquorice-powder, Gregory's powder, or confection of senna—should be of the best quality and effective action, even if prepared according to the B.P.

#### AN INTERNATIONAL PHARMACOPŒIA.

A General Pharmacopœia, that would enable a pharmacist to dispense a prescription with uniformity in any pharmacy on the Continent, may be regarded as a Utopian rather than a practical idea, and could only be attained by alphabetically arranging in dictionary form all the formulæ in all the known pharmacopœias. But there can be no reason why an approach towards it should not be made by a congress of medical men and pharmacists, limiting their attention in the first place to poisonous preparations only, and, in order to avoid international jealousies, adopting as a standard the formulæ that approach nearest to decimal proportions. The comparison of different formulæ is rendered a simple matter by the publication of the different strengths of preparations of the various pharmacopœias in Squire's "Companion to the British Pharmacopœia." The next step might be to make uniform the strength of the most generally used preparations that are not poisonous. A really useful international Pharmacopœia cannot be otherwise than a slow growth.

The introduction of standardisation of the more powerful preparations of the Pharmacopœia, and the stringent chemical and microscopical tests now ordered in that work to ascertain the purity of drugs, cannot be carried out in any but large businesses where several assistants are kept, and where one man can devote his whole time to testing drugs and standardising preparations. Hence the personal guarantee of the purity of the preparation he supplies is passing out of the hands of the single-handed retail pharmacist.

The increase of knowledge in every branch of medical science has caused the study of pharmacy and pharmacognosy and dispensing to be somewhat neglected, and forced them to occupy a comparatively unimportant position in the curriculum of medical study, so that the art of prescribing



is in danger of being lost. The medical practitioner— anxious to utilise the most recent improvements in scientific remedies, but with his time fully occupied in visiting patients and diagnosing diseases—consequently indicates what he requires to the pharmacist, who readily supplies him with a list of formulæ compiled from the most recent publications, or specially devised to meet the wants of the prescriber, who accordingly chooses from those put before him the one he considers most suitable. Naturally, these preparations can be more economically prepared on the wholesale scale. The retail pharmacist has little chance of success unless he can conduct his operations on the large scale, and many of the more enterprising are therefore turning their businesses into limited-liability concerns. Co-operation is a growth of the times; an outcome of competition. Judging from past history, it is as unwise and useless to attempt to oppose the growth of co-operation as it was for the courtiers of Canute to ask him to forbid the advance of the sea. Co-operation has come to stay, and, like a forest fire, can only be met by similar tactics—i.e., by co-operation. The only hope for a livelihood for those who have not much capital is in co-operating with those who possess it, a co-operation of knowledge with business capacity.

With respect to the use of the titles, "Pharmaceutical Chemist" and "Chemist and Druggist" by companies, it is difficult to find any sound objection to this, provided all the members of the company are legally qualified to use it; but where they are not, and company laws are utilised to cover incompetent persons who have possibly failed to satisfy the legally-appointed examiners of their competency to dispense medicine, such an illogical and unjust use of the titles should be uncompromisingly opposed by a thoroughly well-organised political resistance to any Bill proposing it. In other words, no company should be allowed to use a legal title for which its members have not the qualification prescribed by law. The logical result of such a concession would be to nullify the Pharmacy Act, since if one man who fails to pass an examination in pharmacy can join with six others to form a limited-liability company which can use the titles of pharmaceutical chemists or chemists and druggists, a number of persons would be able to do what the law has expressly stated one man may not do. The injustice that would thus be done to those who have already expended much time and money to obtain the title is so obvious, that it can hardly be possible that disinterested and conscientious legislators could support such a provision for disregarding vested interests, or could adopt the principle it would involve of making one law to enable persons to evade another.

Another change noticeable during the latter part of the century has been the enormous increase in the public demand for what are known as patent medicines. This may be seen from the amount derived from the sale of medicine stamps, which has increased from 43,632*l.* in 1860 to 266,404*l.* in 1899. The preparations commonly alluded to under this heading consist in reality of at least three different classes.

1. The quack medicine, a preparation advertised to cure everything, or nearly so.

2. Proprietary medicines, such as chlorodyne, liquor opii sedativus, liquor bismuthi, fluid magnesia, pepsin wine, &c., which have some real value as medicinal agents, and have been so much prescribed by medical men that in many cases official imitations have been introduced into the Pharmacopœia.

3. Proprietary articles for domestic use, such as perfumes, hair-lotions, peptonised and pancreatised and malted foods, inhalers, court-plaster, and skin-soap.

The first class are objectionable from every point of view. But proprietary medicines are often the result of the application of chemical knowledge and pharmaceutical skill in advance of the time, and as such, and as comprising also the personal element, have a value of their own. So long as they are prepared by one person, directly interested in the excellence and uniformity of the productions, they are even more likely to be uniform in character than a B.P. preparation prepared by different operators within the too-often wide limits of quality of drugs allowed by the descriptions and tests of that work. Proprietary articles, as distinct from proprietary medicines, are usually started to meet a public want, and, although their sale doubtless depends largely on advertisement, they would soon go out of use, like date coffee, if they had no intrinsic merit of their own.

These articles, therefore, form a part of the chemist's business that is worthy of attention from another point of view than that of retail sale. Whilst the limit of profit is reduced by the competition of stores to a level at which it does not pay the chemist to keep his money lying idle in stock, the obvious remedy is for the chemist not to retail any proprietary articles except his own or those which are protected by the P.A.T.A. Each chemist should manufacture his own speciality, since the manufacturer's profit is certain, and can be arranged at a paying rate, whilst that of the distributor is not so in many cases. The stores and large capitalists can alone make these retail sales pay at the present ruinous prices by buying in very large quantities, and the heavier their stock and the more numerous the articles they are compelled by the demands of the public and by advertisements to keep in stock, the less profit they will get, until a time will arrive when the interest lost on money lying idle in such stock must lead to the raising of prices or to giving up the sales.

#### THE PRESENT STATE OF PHARMACY.

is a somewhat anomalous one. As hitherto practised in this country, it consists, like the fabulous mermaid, of two incongruous halves. On one side it is a business which, to be successful, must be carried out on business-lines; on the other side it is a profession, which should be conducted in accordance with professional principles. But as both are usually carried on in one room, the public finds a difficulty in discriminating between them, and concludes that the price paid for the dispensing of medicine represents an enormous profit on drugs, instead of being partly a legitimate profit and partly a very small professional fee, no allowance being made for the skill and knowledge bestowed on the preparation of medicine, nor for the responsibility of insuring accurate dispensing. This is not to be wondered at if the pharmacist himself does not draw the distinction, but carries on both the business and the profession in one and the same room. Patent-medicines and packed goods, and ready-made preparations which require no skill and entail no responsibility, cannot be sold at professional prices, and it should not be a matter of surprise, if such prices are demanded, that business-men step in and sell them according to business methods. The two departments must be kept quite distinct if the public is to recognise the professional side of pharmacy. But the public is perhaps beginning to understand that there is such a side, for in cases of serious illness most people prefer to have their medicine dispensed by firms whose reputation as accurate and conscientious dispensers is unquestioned, rather than at stores. If the public has not yet learned that there is as much difference in the qualities of drugs as there is in the quality of tea, coffee, and other groceries, it is the fault of the druggist for not pointing it out and proving that those who sell cheaply must necessarily buy cheaply, since a business-man is not likely to sell the best article at the price of the lowest and try to live by the loss.

So long, however, as the Pharmacy Act of 1868 continues in operation it is almost impossible for the pharmacist to divorce his business and profession. He is faced by the position that the Government requires from the pharmacist for the safety of the public, an expensive and tedious course of study before he can legally acquire the title of chemist and druggist, and before he can supply certain scheduled poisons to the public, although he may rarely see a prescription, and other traders can sell other poisons, equal fatal and more frequently used, such as carbolic acid. Those, therefore, who live in districts where the business obtainable partakes more of the nature of that of a general dealer in chemical substances used for technical, agricultural, or horticultural purposes, but involving no personal responsibility, only pass the Qualifying examination because they are obliged to do so by law, not because the knowledge of dispensing is of much use to them. This class form probably at least three-quarters of those engaged in business as chemists and druggists, especially in the more populous centres in the Midlands and North of England. What the most need is a commercial education, instructing them in business methods and modern requirements. This has hitherto formed part of a pharmacist's education, and therefore the importance of the course of commercial education which has been started in some of our uni-



ties, and already forms an optional subject at the Philadelphia College of Pharmacy, cannot be over-estimated—at all events for those chemists and druggists who have to depend chiefly upon the sale of miscellaneous chemical and other articles rather than on dispensing. The conditions which have hitherto obtained in the retail trade of chemists and druggists have not during the last fifty years been favourable for acquiring a useful knowledge of business methods, and such knowledge has undoubtedly in some cases been sought in a practical form in co-operative stores in the same way that Germans come to this country to learn English methods of business and then use them against us. The stores have, at all events, served a good purpose in tending to cause co-operation among chemists themselves. Co-operation can only be successfully effected by co-operation, and when competition has lowered profits to a point at which it is impossible to live, the natural reaction is bound to follow in the form of combinations or trusts to keep up the price to a remunerative ratio. This has been manifested already in connection with the kaffin-oil and cotton-thread industries and iodine, and the I.A.T.A. represents a step in the same direction.

#### THE FUTURE OF PHARMACY.

The history of the closing century indicates that scientific progress may be expected to be increasingly rapid in the coming one. As each new theory opens up new roads of discovery, new trades will follow, or a differentiation of old ones. The pharmacist or dispenser of medicine will probably find enough to do in connection with new synthetic products, proprietary articles requiring knowledge of skill, and new medical appliances. The chemist and druggist will find that he must keep pace with discoveries in chemistry and the technical uses of new chemicals, and will learn to realise the meaning of Dr. Playfair's maxim that the competition of industries is the competition of intellect.

As the science of sanitation increases and the laws of health become better known, demands for antiseptics and preservatives of all kinds, both for public and domestic purposes, are certain to increase, and the time may come when liquid air or liquid oxygen will be as commonly sold for sanitary purposes as potassium permanganate is at the present day. The study of animal chemistry, as yet in its infancy, may lead to the preparation of foods that will involve no waste of energy in digestion, and in combining the minimum of nutrition with the minimum of space. The immense importance of such concentrated food for travellers, and for armies engaged in districts where transport is difficult, may easily be conceived.

The investigation of cellulose and protoplasm will probably lead to chemists the methods by which gum, wax, fats, oil, starch, and even alkaloids and glucosides, are formed by plants, and before another century is over it may be as easy to obtain artificially by chemical means all these important commercial products from sawdust, as it is to prepare glucose at present.

The knowledge that bacteria and ferments can produce substances which result in their own destruction, will probably be carried out to its logical conclusion, until for all diseases resulting from these causes appropriate antidotes will probably be discovered and kept in stock by the pharmacist, by whom means of preserving them in active condition for a definite time will have to be discovered. The study of the healthy glandular secretions of the human body as remedies in disease will almost certainly lead to a study of the chemical processes by which they are formed, and the attempt to produce them artificially. This, again, may possibly be followed by an investigation of the nervous stimuli under which they are produced in nature, and to the properties of the nerve force which causes the secretion of the various fluids produced by the glandular system for the regulation of bodily waste.

Another and far-reaching object of research may be the scientific investigation of the inter-relationship of mind and body, the possibility of diseases being caused and cured through the mind, or by the power of the will to control the supply of nervous force to the various organs of the body. Possibly many of the diseases attendant on lowered vitality might thus be successfully combated.

Study of the laws regulating the curious phenomena of

idiosyncrasy, which is one of the greatest hindrances to the scientifically-accurate treatment of diseases, may lead to the possibility of preventing it or curing it at an early stage by hypnotic suggestion or other means. But whatever discoveries the future may have in store, the existence of the pharmacist will in any case depend upon the power of accommodating himself to new conditions, and his ability to turn to practical account the very latest discoveries in science.

#### OBITUARY.

It is always one of the most painful duties of the President of the Conference to record the death of any of its members. During the preceding year the loss has been unusually heavy. Three of the past-Presidents of the Conference and one Vice-President have entered into their rest. Mr. Thos. Greenish, not only as President of the Conference, but as President of the Society, exercised a powerful influence for good. Quiet and unostentatious, but with an exceptional amount of common sense, he dealt with the pharmaceutical problems of the time with a shrewdness that has left an impression on pharmaceutical politics to this day, and his address both before the International Pharmaceutical Congress in London in 1871, and his presidential address at the Conference meeting at Birmingham in 1886, are even under present circumstances worthy of perusal. Having visited most European countries, as well as the United States, and having interested himself in the condition of pharmacy in each, he acquired broad and just views of pharmacy. His address to the Conference was in every sense an ideal one, suggestive and practical. The unofficial formulary of the Conference is an outcome of one of his suggestions, the federation of local associations may be said to be another, and a third is apparently approaching consummation—viz., that there should be in the future revision of any national Pharmacopoeia a permanent committee or commission comprising amongst its members the largest possible number of pharmacists. In Mr. Greenish the Society has lost a wise counsellor and the Conference one of its most distinguished and useful Presidents.

The death of Mr. E. C. C. Stanford was a great surprise and grief to his many friends. Beloved by all who came in contact with him for his geniality and kindness of heart, and respected for the intellectual powers which rendered him a most interesting companion, no face will be more missed at the Conference meetings. Always an investigator, he kept up to date with modern discoveries, and he was especially interested in seaweed products, and made them the business of his life. Iodine was the keynote of his work, and its presence in the thyroid-gland secretion was the subject of his last paper before the Conference. He was one of the founders of the Conference and President of the meeting at Edinburgh in 1892, and largely contributed to the very successful character of the meeting. He will live long in the hearts of his friends, and his discovery of algin will keep his name in the rolls of science as an investigator.

Mr. Richard Reynolds, who died on April 5, 1900, was one of the founders of the Conference, and acted as Hon. Secretary in conjunction with Dr. Attfield from its foundation till 1871. He was President of the Conference in 1881, at the meeting at York. In his early days he was much interested in botany and natural science, and it was he who suggested the Phytological Club, of which he was the Hon. Secretary. Specimens of rare plants collected by him, Mr. H. Deane, Daniel Hanbury, and H. B. Brady, and other members of the Club, are still in the British Herbarium of the Society's Museum. In his latter days he took equal interest in horticulture. His life was one of continuous industry, largely in the public interest. He was an examiner of the Pharmaceutical Society when the appointment was unremunerative, acted as a Councillor of the Society from 1869 to 1870, and was first Chairman of the Chemists' and Druggists' Association of Great Britain, founded in 1876 as a defence association for chemists against the injurious proceedings of public analysts. One marked feature of his character was the persistence with which he carried to a successful issue any object which he was satisfied was a good one. This was shown especially in his work as Hon. Secretary to the Yorkshire College of Science, and in his opposition to the use of methylated spirit in tinctures. As one of the unobtrusive but distinctly influential pharmacists of his day, the death of Mr. Richard



Reynolds will be widely felt as a severe loss both to the Conference and the Society.

The loss Irish pharmacists have experienced by the death of Mr. R. J. Downes, late President of the Pharmaceutical Society of Ireland, seems to emphasise the fact that the Conference is the only body which binds Irish and British pharmacists in a common union. Mr. Downes was most highly esteemed in Ireland as a conscientious, high-principled, genial gentleman, and fulfilled the responsible duties of his office in a manner that inspired respect on both sides of the Channel. The members of the Conference who had the privilege of his personal acquaintance join with their Irish compatriots in regretting his early death,

when apparently he had a life of much usefulness before him.

Even within the last fortnight death has been busy, and has removed at the ripe old age of eighty Mr. John Borland, one of the oldest and best-known pharmacists in the West of Scotland, who well upheld the reputation of being a high-class pharmacist, taking a practical interest in art, literature, and natural history, and being widely respected for his scientific attainments. He acted as Examiner in Botany for the North British Branch of the Society, and for five years was a member of the Council of the Society. His modest and unassuming manner and singularly amiable character endeared him to all who came in contact with him.



Mr.  
Wardleworth's  
West  
Indian  
Views.

SCENE NEAR PORT  
ANTONIO, SHOWING  
COCONUT PALMS.



WEST INDIAN  
NATIVES WORKING  
AMONGST THE  
SUGAR-CANES.



# The Proceedings

## First Session.

TUESDAY morning was brilliantly fine, but hot, and shortly before 10 the handsome Throne Room of the Holborn Restaurant became thronged with conferencers waiting to hear the President's address. At ten minutes past 10, amidst applause, the President took the chair, on his right being seated the Honorary Secretaries (Messrs. Naylor and Insom), Mr. Newsholme, and Mr. Martindale, on his left Mr. Attfield, Mr. Atkins, and Mr. Harrington. There were about three hundred people present, including a large sprinkling of ladies.

### ADDRESSES OF WELCOME.

Mr. GEORGE T. WILKINSON NEWSHOLME said: Ladies and Gentlemen,—As President of the Pharmaceutical Society I have very much pleasure in welcoming the British Pharmaceutical Conference once again to London. Twenty-six years ago the Conference met in this metropolis. During these twenty-six years it has wandered pretty much all over the country; it has met in some of the largest cities of England, Scotland, and Ireland. During the whole of those years you had at the head of it distinguished men, distinguished members of our own craft, of the Pharmaceutical Society, and others who have been more or less closely associated with us. It is well known that the Conference is a separate body distinct from the Pharmaceutical Society, but, as I have already said, it numbers amongst its members a great number of those who belong to our own craft. During the existence of the British Pharmaceutical Conference an immense amount of good work has been done in connection with our own business—that of pharmacy, and whilst, as I have already said, many distinguished men have occupied the position of President, there has not been any more distinguished than our President of to-day. (Hear, hear.) The name of Holmes—Edward Morell Holmes—is a household word in pharmacy, not only in this country, but all over the world. As the distinguished Curator of the Pharmaceutical Society he has been, I think, in communication with everyone practising our craft all over the world. It is not my intention to occupy much of your time, because I know that Mr. Holmes has to speak to you at considerable length, and you have come here more to hear him than to hear me. But let me say that I give you members of the Pharmaceutical Conference a welcome to this metropolis. I hope that the work which will be done this day, and this week, will redound to the credit of the Pharmaceutical Conference. During its many years' existence it has done very great work, and at this meeting in London, which I daresay you expect to be a record one in point of numbers, I hope that the work which will be done may be for the further advancement of pharmacy, and I wish you, Sir, very great success.

Mr. MARTINDALE, Chairman of the Local Committee, said: Mr. President, ladies and gentlemen,—In adding to the welcome which has been given you by the President of the Pharmaceutical Society, I would only say a few words, more especially when I consider that every man is a debtor to his profession, and the Pharmaceutical Conference is of the nature that we meet to discuss matters of a scientific and practical nature in connection with our calling. It is a peregrinating body that has met in most of the cities of the Empire since it last met in London twenty-six years ago. I am, perhaps, with the exception of two or three, nearly the oldest member of the Conference. I joined it as long as thirty-one years ago, I think—when it met under the presidency of the late Daniel Hanbury at Exeter. It has, in addition to its scientific and practical nature, a social

side, and it is more especially of that that I wish to speak to you this morning. I would remark that we have been entertained, loyally and royally entertained, at many of the cities of the Empire, to which I have referred, during the past twenty-six years, and we especially want in London to reciprocate some of the kindly feeling which this meeting engenders amongst pharmacists. It is on this side that I wish more especially to welcome you here in this metropolis of the world. I would merely add to what the President of the Pharmaceutical Society has said to you this morning, that in addition to the scientific and the paper-reading side of the Conference, we hope to have, if the weather be not too hot, some items that will be worth your attention, perhaps, in London. I add to the words of the President of the Pharmaceutical Society a very cordial welcome to you here to-day.

Mr. HARRINGTON (Vice-Chairman of the Local Committee) said: Mr. President, ladies and gentlemen,—The President has very kindly allowed me to say a few words to add to the welcome given to you on your visit to London. I think perhaps he has accorded me this honour because it was my privilege to convey to you the invitation for this visit twelve months ago at Plymouth. We hope that you will all have a good time in London; it will not be our fault if we do not make things comfortable for you. I think if we have fine weather and short speeches things may go very comfortably. I may remind you that amongst the company you will see a few members with pink carnations and a golden "C" underneath. If you should require any information, or want to know the time—(laughter)—you need not ask a policeman. If you will ask any one of those ladies and gentlemen wearing that carnation they will be pleased to give you any information you may require. Ladies and gentlemen, I welcome you to London, and I hope you will enjoy your visit. (Applause.)

The PRESIDENT of the CONFERENCE, in reply, said: I am sure I shall be expressing the feeling of all those present when I say how highly they appreciate the welcome accorded to the Conference by the President and Council of the Pharmaceutical Society of Great Britain in providing such a magnificent room for its opening meeting and in placing the rooms of the Society in Bloomsbury Square at its disposal. The Conference may be called the child of the Society, and at the time of its first visit to the metropolis it was a child of only 11 years of age. Since then it has visited many of the principal towns and cities of Great Britain and Ireland, and now, at the mature age of 37 years, the wanderer returns to the home of its parent, the Pharmaceutical Society, to find itself welcomed with open arms and the best that the house affords placed before it. In fact, it is a right royal welcome that it receives—for are we not welcomed in the Throne Room, and are we not to dine in the King's Hall? (Laughter and cheers.) We trust that the hearty welcome that you have so gracefully expressed may serve to cement the bonds that already exist between the Society and the Conference—that the latter may be able to show its gratitude by rendering any service that may be possible to further the interests of the parent Society. May the old firm become all the stronger for the help of its junior partner in its work. I very much regret that the President of the Conference in London of 1874, my dear old friend, Mr. T. B. Groves, is unable to be present on this unique occasion, when the Conference is welcomed by a country member of the Society, who thus represents in his own person a double welcome, one from the country, and one from the metropolis—a presage, it may be hoped, of greater union in the ranks of pharmacy in the future. I trust, ladies and gentlemen, that you will show that you are really



grateful to the Society by expressing it in a hearty and cordial manner. (Loud cheers.)

#### A COMPLIMENT TO MR. GROVES.

Mr. ATKINS said: Ladies and Gentlemen,—It has been suggested that it might not be quite inappropriate if I at this stage, which I hope is the right stage, speak to a particular point. I have been well said this morning that twenty-six years ago my old and esteemed friend, Mr. Thomas Groves, of Weymouth, was the President of the Conference. Now, ladies and gentlemen, I venture to suggest that it will be graceful on our part, and it would be welcome to him, if we send him a telegram of congratulation. (Hear, hear.) It is a source of regret to him and regret to myself, as an old friend of his—for we commenced our careers together in the same town and ran our early days together in the training of pharmacy as friends—it is a source of very great regret to him and to myself that he is not able to be present with us to-day. His health does not permit, or rather I should say that, whilst his general health is good, his hearing is so seriously impaired that he would not be able to take part in the proceedings. But I know sufficient of him to know this, that if you send him to-day a note of congratulation and expression of regret that he is not able to be with us it will be very heartily and graciously received by him. Mr. President, I venture to suggest that a telegram to that effect be sent to Mr. Groves from yourself and the members of the Conference here assembled. (Applause.)

The PRESIDENT: Your approval is evident from the acclamation with which you have received the proposal. A telegram will be sent off at once. (Hear, hear.)

The PRESIDENT then delivered his address, for which see page 190.

#### THANKS TO THE PRESIDENT.

The delivery of the address occupied fully half an hour, and many points in it were applauded. After Mr. Holmes had resumed his seat,

Mr. C. B. ALLEN (Vice-President of the Pharmaceutical Society) rose to propose a vote of thanks to him for the address. He thought it would be matter of some surprise to many that Mr. Holmes had been able to give them such a thoroughly practical pharmaceutical paper. He hoped it would be read by pharmacists in all parts of the country. Mr. Holmes appeared to have touched on the whole question of pharmaceutical politics as well as the difficulties which constantly occurred in their business, and he had stepped over several pitfalls without having made an appreciable stumble. There was argumentative matter certainly in Mr. Holmes's address, and he hoped such matters would be thoroughly thrashed out. He proposed that a very hearty vote of thanks be accorded to the President for his address. (Loud applause.)

Mr. ATKINS (Treasurer of the Pharmaceutical Society) eloquently seconded the vote in the place of Mr. Warren, who was said to be absent. He congratulated Mr. Holmes most heartily. Their President occupied, he thought, an unique position. He could not conceive anything more appropriate than that in London, as the centre of the universe—(laughter)—the pharmaceutical universe—(loud laughter)—Mr. Holmes should be the President of the Conference. There was not a man amongst them who had been more generally consulted by the younger pharmacists than Mr. Holmes—(applause)—and he ventured to say, after very wide observation, that no man, no student, ever went to Mr. Holmes perplexed with a question and was turned aside. He would go further, and say that if Mr. Holmes had a fault it was that he had made himself too accessible—his brains had been at the command of everybody. There were men scattered throughout the world—at Johannesburg, Maritzburg, in Australia, and in the wilds of America—whose correspondence asserted that when they were students at Bloomsbury, or when they called at Bloomsbury Square and put their difficulties or questions before Mr. Holmes, that if he could not set them right nobody could. He did not think they could give a higher testimony to the worth of their friend and to his scientific attainments in *materia medica* than to accord him a very hearty vote of thanks for the admirable address which he had delivered as President that day, and he seconded the vote of thanks, not only for that, but for the general courtesy which he would be certain to accord to

all of them during the Conference meeting. (Loud applause.)

Dr. J. ATTFIELD, F.R.S., as the senior Vice-President who had occupied the presidential chair (except Mr. Groves), said it was his duty to put to the meeting the resolution which had been proposed. He cordially supported every word that had been said respecting Mr. Holmes's work. Mr. Holmes might, of course, have given them a learned address on the subject on which he was the greatest living authority—namely, pharmaceutical botany. As a botanist, no man living had done more service to pharmaceutical science and the art of pharmacy than Mr. Holmes. No man had done more service to the Pharmaceutical Society than he, either as curator of the Museum of the Society or as the author of researches relating to pharmaceutical botany, but he had chosen, in the happy words of Mr. Allen, as a looker-on at the pharmaceutical game to give them one of the most comprehensive addresses that it had been his fortune to listen to. The resolution was then put to the meeting and the vote of thanks was accorded with loud and continued applause.

The PRESIDENT said:—Mr. Allen, Mr. Atkins, Dr. Attfield, ladies and gentlemen, I owe a deep debt of gratitude to you for the patience with which you have listened, during such oppressive weather, to a lengthy address, delivered not, I fear in the penetrating voice, and pleasant tone, and telling manner that some of the eloquent speakers in the audience could have done. The address is, I fear, not of the nature and quality demanded, or at all events expected of your present President. If I have followed the example of my illustrious predecessor at the last meeting of the Conference in London, it is because I felt that the problems of the present and future possess more general interest than botanical or allied subjects. I do not expect that the views I have expressed will meet with the universal approval of those engaged in the arena of practical pharmacy, but I shall be content if they seem worthy of perusal, as those of one who has for the last quarter of a century regarded the practice of pharmacy from an outside standpoint, but with sympathetic eyes. I thank you sincerely for the kind manner in which you have received the address. (Applause.)

#### THE RECEPTION OF DELEGATES

was the next business on the agenda and the following were the representatives of the various Associations this year at the Conference, most of whom were present:—

Pharmaceutical Society of Great Britain.—Messrs. Newshol (President), Allen (Vice-President), Atkins (Treasurer), Cartwright, Cooper, Cross, Harrington, Harrison, Hills, Glyn-Jones, John Martindale, Symes, Wootton, Young.

Pharmaceutical Society of Great Britain (North British Branch).—Messrs. Peter Boa (Chairman), R. McAdam (Vice-Chairman), W. B. Cowie, W. L. Currie, A. Davidson, J. L. Ewing, J. I. Freckleton, J. Jack, J. Johnston, C. Kerr, A. Naysmith, D. Storrar.

Pharmaceutical Society of Ireland.—Messrs. G. D. Beggs (President), J. J. Bernard (Vice-President), Professor Tichborne Kelly, W. F. Wells.

Aberdeen Pharmaceutical Society.—Messrs. J. Cruickshank, W. Giles, J. Johnston, J. Paterson, C. Simpson.

Brighton Association of Pharmacy.—Messrs. C. G. Yates, W. W. Savage.

Bristol Pharmaceutical Society.—Messrs. B. Keen and C. Turner.

Cambridge Pharmaceutical Society.—Messrs. B. S. Cannon (Hon. Secretary), E. H. Church, A. Deck, E. S. Peckham, Sturton.

Chemists' and Druggists' Society of Ireland.—Sir J. H. H. M.P. (President), Messrs. W. Jamieson and S. Gibson.

Dover Chemists' Association.—Mr. R. M. Ewell (Hon. Secretary).

Edinburgh Chemists' Assistants' Association.—Messrs. D. McLaren and J. R. Hill.

Forfarshire Chemists' Association.—Messrs. A. B. Anderson, W. Cummings, A. Davidson, J. Jack, C. Kerr, A. Naysmith, and J. Russell.

Hull Chemists' Association.—Mr. C. B. Bell.

Leeds Chemists' Association.—Messrs. F. W. Branson and G. W. Worfolk.

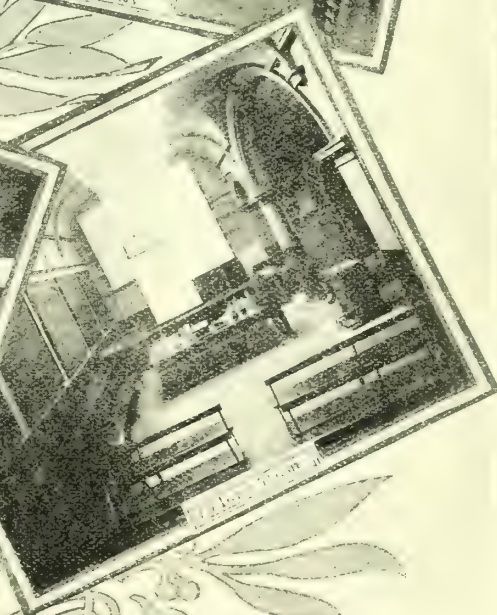
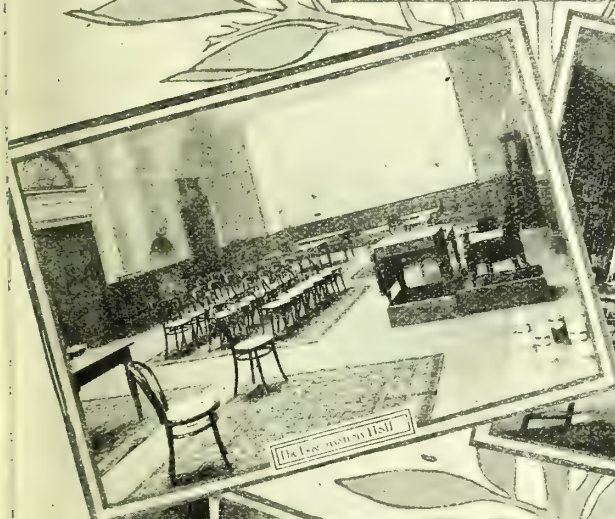
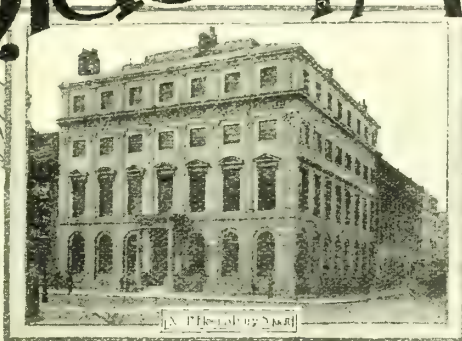
Liverpool Chemists' Association.—Messrs. J. Alexander, J. A. S. Buck, R. C. Cowley, H. O. Dutton, E. Evans, junr., H. Marsden, J. Smith, T. H. Swinton, C. Symes, and T. H. White.

London Chemists' Assistants' Association.—Messrs. J. A. Hirst, T. W. Gamble, C. J. Strother, and T. M. Taylor.

London Western Chemists' Association.—Messrs. J. F. H. Hirst (President) and H. Cracknell (Vice-President).



# The Place of Meeting





Manchester Pharmaceutical Association.—Messrs. C. A. Johnston, H. Kemp, W. Kirkby, A. J. Pidd, and J. Wild.

Newcastle-on-Tyne and District Chemists' Association.—Messrs. T. Maltby Clague, G. F. Merson, G. Foggan, and Peter Bell.

North-East Lancashire Chemists' Association.—Messrs. R. Lord Gifford and C. Shorrocks.

Plymouth, Devonport, and Stonehouse and District Chemists' Association.—Messrs. F. Maitland (President), J. Barge, F. W. Hunt, J. D. Turney, and W. H. Woods.

Sheffield Pharmaceutical Society.—Messrs. G. Squire (President), A. R. Fox, G. T. W. Newsholme, and J. B. Pater.

Sunderland Chemists' Association.—Messrs. J. Hutchinson, R. Robinson, and C. Rankin.

Oxford and District Chemists' Association.—Messrs. H. Mathews and G. C. Druce.

Glasgow and West of Scotland Pharmaceutical Association.—Messrs. W. L. Currie, R. Brodie, G. Robertson, and D. Watson.

Exeter Chemists' Association.—Mr. H. Wippell Gadd.

Midland Pharmaceutical Association.—Messrs. F. H. Alcock, G. H. Brunt, A. W. Gerrard, J. Poole, and C. Thompson.

The PRESIDENT, in offering the welcome of the Conference to the delegates, said the list of their names and associations was the largest ever before received. He was very pleased to see such an interest taken in the country in their proceedings. (Applause.)

#### REPORT OF THE EXECUTIVE COMMITTEE.

The thirty-seventh report of the Executive was read by Mr. Naylor. It showed that during the year special efforts had been made to increase the membership, and as a result 137 candidates had been elected. This number was, however, nearly neutralised by deaths and resignations, so that the net increase was only five. The hope was expressed that members would still keep up their interest in the Conference and try to obtain new members.\* The "Blue List" which it had been customary to send had been discontinued, the list under the name of the "Research List" having been published by the editors of the various pharmaceutical periodicals. The change has effected some economy to the Conference. The greater portion of the *Year-book* was in the printer's hands. Mr. Parry would report to the meeting the result of his examination of sandalwood oil, to assist in the carrying out of which the Conference a year and a half ago granted 5*l*.

In order to further encourage the promotion of pharmaceutical research the committee had under consideration the proposal to raise a fund for the purpose of maintaining a qualified chemist, who shall devote his whole time to the prosecution of work directly connected with pharmacy. Annual subscriptions for at least three years, amounting to 94*l*. 10*s*., have already been promised in support of the scheme. Reference was made to the resignation of Mr. J. C. Nightingale, the Assistant Secretary, on account of failing eyesight, and the appointment of Mr. J. Hearn to the post temporarily. The deaths of no fewer than four Vice-Presidents—Mr. Richard Reynolds, Mr. Thomas Greenish, Mr. E. C. C. Stanford, and Mr. Downes were alluded to, as also the deaths of Mr. T. M. Wilkinson, Dunedin (for the last sixteen years Hon. Colonial Secretary for New Zealand), and Dr. Anton von Waldheim, of Vienna.

Finally, the death of Mr. John Borland, which occurred three weeks ago, was mentioned, and testimony paid to his sterling qualities.

#### THE TREASURER'S REPORT.

This showed that the expenses of the *Year-book* amounted to 399*l*. 6*s*. 6*d*.; sundry expenses, 11*l*. 1*s*.; salary of Assistant Secretary and rent of office, 55*l*.; postages, 14*l*. 8*s*.; and printing and stationery, 16*l*. 12*s*. The assets included receipts from advertisements, 74*l*. 3*s*. 2*d*.; sales of *Year-book*, 14*l*.; members' subscriptions, 370*l*. 0*s*. 7*d*.

It followed that the unsatisfactory financial position of the Conference reported last year was still more unsatisfactory. The deficit last year was 25*l*. 18*s*. 5*d*.: it was now 54*l*. 16*s*. 2*d*. Unless a strong effort was made to arrest the increase of liabilities it would be impossible to maintain the good work of the Conference.

Mr. UMNEY, in presenting the report, pointed out there

\* The President alluded to the fact that many subscriptions were unpaid, and hoped the members would see their way to sending their subscriptions promptly.

was a deficit of 54*l*. 16*s*. 2*d*., but that it was proposed to endeavour to neutralise this by making the *Year-book* more valuable as a reference-book to pharmacists, and so more valuable as an advertising medium.

Mr. BRIDGE moved the adoption of the report and financial report, and said it was a pity that there was a deficit of 50*l*., which he hoped would be done away with. He did not like the idea of making the *Year-book* an advertising medium, he thought they ought rather to raise money by getting extra members.

Mr. CROSS, in seconding the adoption, said that if advertisements were necessary he hoped they would be worthy of the book.

Dr. ATFIELD said that for twenty-eight years he had listened to such speeches as those. In 1872 he was opposed to the introduction of advertisements in the *Year-book*, and had endeavoured to avoid it. Unfortunately, they could not get sufficient members without advertisements. The number of members rose gradually till it reached 3,000, but the number has now very much decreased, so that there was no help but to make the *Year-book* so attractive that it would be a good medium for advertisements.

On the suggestion of Mr. UMNEY, seconded by Mr. BRANSON, the report was adopted.

#### REPORT OF THE FORMULARY COMMITTEE.

The report said it was six years since the last edition of the Conference Formulary was published, and members might reasonably ask for an explanation of the delay. Up to 1898 the reason given was that as the publication of a new Pharmacopœia was imminent, and some of the members of the Formulary Committee were also members of the Pharmacopœia Committee, it had been deemed advisable that the work of the former committee should remain in abeyance until the Pharmacopœia was published. During 1899 preliminary work was done by correspondence, which was delayed by the amount of work which devolved on the Chairman as President of the Pharmaceutical Society, which compelled him to resign the chairmanship of the Committee. A new chairman was elected at a meeting on December 6, and a provisional list of preparations suggested by the various members adopted. At that meeting Mr. Boa and Mr. Wilson were added to the Committee. Subsequent meetings were held on March 7 and June 13, when specimens of various preparations were exhibited and the formulæ fully discussed, with the result that in addition to certain modifications in one or two old formulæ which were not quite satisfactory, it was proposed to publish the Formulary towards the end of the year. It was suggested that the word "unofficial" might be deleted from the title of the Formulary as it might leave the impression that the Formulary was not the official statement of the British Pharmaceutical Conference, and was not likely to be confounded with the Pharmacopœia. Reference was made to the deaths of Mr. Reynolds and Mr. Greenish, from whose initiative the Formulary Committee came into existence, and both gave valuable assistance.

The reading of papers was then commenced, the first one taken being on

#### Sandalwood Oil.

Mr. E. J. PARRY, as a Conference researcher, reported on progress which he has made with his work on the composition of sandalwood oil. His contention that it consists chiefly of alcohols and not aldehydes has received general corroboration. He finds that 90 per cent. of the oil consists of alcohols, some of which have been identified, and he has been able to get one of them in the form of a crystalline compound, as already reported in the *C. & D.* The paper is printed on page 166.

In the absence of the author the paper was given in abstract and Dr. Jowett read the next one on the

#### Chemistry of the British Pharmacopœia.

Dr. F. B. POWER's paper on this subject is printed on page 153. He comments upon fifty-seven distinct articles; the official monographs include errors or inaccuracies, and shows how these may be remedied. His observations include experimental work, the sources of errors being traced in several cases, and it thus appears that the B.P. has adopted tests and descriptions without verification. Among the most interesting work recorded we note suggestions for improving the assay of bismuth salts (especially the salicylate), an observation showing that commercial caffeine is drier than the B.P. says; an objection to the permanganate test—



(cocaine; proof that the B.P. test for cotton is ignorantly wrong; a report on commercial cresotes, showing that they are optically inactive; evidence that the iodometric method of assay is the best for ferric salts, and a report on terebene. To these Dr. Power added some remarks on the general principles of the Pharmacopœia. The fact may be recalled that Dr. Power in association with Dr. Curtman revised the chemistry of the U.S.P., the new text being written by him.

#### DISCUSSION.

The PRESIDENT was quite sure that all who knew Dr. Power felt that all these criticisms were made in a friendly spirit. To make a perfect Pharmacopœia Dr. Power was well aware that it would take twenty years at least; but at the same time the more workers they had in this branch of scientific investigation the more likely they were to approach perfection in the B.P. A great deal of the work that had been done was fragmentary and disjointed. The work might be taken up, he thought, by the evening meetings of the Pharmaceutical Society and the North British Branch, so that there might get a vast amount of really useful critical matter, which would show the medical profession that they took a decided and powerful interest in the work.

Dr. ATTFIELD said it might shorten what would certainly be an interesting discussion if he referred to certain general principles that seemed to him to run through the paper without going into details. The details that had been given in the paper—and especially those that had not been given, but which were recorded in the paper in full—it would be quite impossible for him to discuss under five or six hours. The paper seemed to him to be divided into two parts—Dr. Power's remarks and other people's remarks. Now, with all due deference to Dr. Power, he (Dr. Attfield) did not quite see that it was of much interest to them for him to include with his own admirable work the work of others which had already been published. (Hear, hear.) There was a great part of Dr. Power's work of the nature of research-work, which he welcomed most heartily; but all that relating to other persons' views and statements which had been published already he did not think was in place in a paper read before the Pharmaceutical Conference. He had during the past year, in accordance with instructions from the Medical Council, been endeavouring to produce a proof of an Indian and Colonial Addendum to the B.P., and had also done exactly the work which Dr. Power most partially and unnecessarily incorporated in his paper, for he had reported to the Council every criticism that appeared in the first year of the life of the present B.P., in 1898, and that report was carefully examined by the Committee of the Medical Council, and a certain number of those criticisms were considered to be of much use to the Council in producing the next Pharmacopœia; nineteen-twentieths of them were put into print, and the Council presented a copy to some two or three hundred research-workers throughout Great Britain. That being so he thought the fair inference was that the criticisms of the following years would also be treated in the same way. That was the proper way of dealing with published criticisms, and not to bring them up over and over again. The remainder of Dr. Power's paper resolved itself into two parts, namely, Dr. Power's opinions and his research-work—experimental work. Now Dr. Jowett reminded them that the opinions of Dr. Power were only *his* opinions. In his (Dr. Attfield's) judgment they were not the opinions of a man who was thoroughly conversant with the Pharmacopœia. He did not mean to insinuate by that that Dr. Power had not been a sufficient length of time in this country to study the B.P., and he did not mean to insinuate that in America, in his position as one of the compilers of the U.S. Pharmacopœia 1890, that he had his eye on the B.P., but that his views of the constitution and construction of the B.P. were the views of a man who was not thoroughly conversant with the basis of construction of that B.P. Dr. Power's allusion with reference to each of the monographs of the chemical substances of the B.P. bore out that view. Dr. Power seemed to link that those descriptions of chemicals were insufficient, and from his point of view they undoubtedly were so, but they were not intended to be complete descriptions. He (Dr. Attfield) had advocated their exclusion altogether, and that was done to some extent in 1885, and in the production of the 1898 B.P., he was allowed to carry out his views, and exclude nearly all processes as processes. If they wished

the short statement that remained to be removed, the law must be altered. In another part of his paper Dr. Power referred to paragraphs relating to the particulars of substances which must not be present in the chemicals alluded to. Well, if all the substances there mentioned were presented in one specimen, they would have to go through a very elaborate chart before separating them, and proving absent or present as the case might be. Any man acquainted with manufacturing-chemistry, or the chemistry generally that the pharmacist was expected to possess, would know pretty well what to look for. He did not agree with Dr. Power that there should be a great amount of elaboration in putting these chemical tests. He thought Dr. Power's work was very valuable, and he would take care to bring it before the Medical Council; there was no system or organisation in connection with the production of the B.P. by which statements therein made could be checked. In this respect since 1885 he had issued nine annual reports, which were simply to bring before the Medical Council and compilers of researches and pharmacists such points of criticism as arose. It followed that they would have a better Pharmacopœia in the future as these researches would be included. What was wanted now was a powerful body of research-workers who would check the statements of others. He did not think that would come at present, and his opinion was that it should be a work instituted by the State; such work could be done by many men not far removed from students, whilst the higher research-work might be done by men of larger experience. (Applause.)

At this stage the Conference adjourned for luncheon, which was served in the King's Hall.

#### Second Session.

The Conference was resumed in the lecture-theatre of the Pharmaceutical Society's premises, 17 Bloomsbury Square, W.C., at 2.15 P.M., when about thirty of the younger male members were present. The President invited further

#### DISCUSSION ON DR. POWER'S PAPER.

Mr. C. T. TYRER said one principle should certainly be insisted upon in fixing Pharmacopœial standards—viz., they ought to go for the highest point of purity, not as to what was obtainable under research conditions, for there is a difference between the processes of the test-tube and the tub, but what could be produced under the best economic conditions. *En passant*, Mr. Tyrer remarked that there was a good deal of talk nowadays about research at 80% a year, and he thought it was possible to rely too much upon that, and forget that manufacturers have laboratories and that the work done in them is always available to the Pharmacopœia authorities.

Mr. F. H. ALCOCK remarked that Dr. Power seemed to prefer the incineration method for assaying bismuth, but that process was really not available because of the volatility of the bismuth. [Later Mr. Alcock explained that he meant by this that when ammonio-citrate of bismuth is incinerated some carbon is liberated, which reduces the oxide to the metallic state.] The large quantities of reagents and materials ordered in the B.P. were a distinct drawback to the student, and the authorities would do a great deal of good if they would reduce the quantities, and generally make the monographs clearer.

Mr. SAGE considered that the Conference should give a large share of attention to this paper, owing to Dr. Power's connection with the United States Pharmacopœia. That book might not be everything that they desired, but it was the best for students and business men. (Applause.) One had only to read the U.S.P. monographs in order to see how things should be tested. Mr. Sage gave examples.

Mr. UPSHER SMITH, referring to the incineration test for bismuth, said he was inclined to think that it is better than the sulphide one. He is now engaged on a little research, which he hopes to publish the results of shortly. (Hear, hear.)

Mr. WATSON WILL considered that Dr. Power had done good service in this communication. (Hear, hear.) The B.P. way of estimating bismuth is bad, but a good method, which gives concordant results in the hands of senior students, is that of precipitating the metal as normal bismuth phosphate—dissolving the original salt in nitric acid, satu-



rating with sodium acetate, and precipitating with sodium phosphate. He was not altogether in favour of the B.P. as a book; he preferred the U.S.P. The old-fashioned method of estimating ferric salts by incineration led to error owing to the fact that the washing was troublesome, and the incinerate contained magnetic iron. The B.P. also gives too large quantities for testing; he instanced chloral hydrate and manganese estimations. Dr. Attfield remarked in his report that a new method for estimating hydrogen peroxide is wanted, and for that purpose he commended either of the three volumetric processes in preference to a gasometric one. He believed that, American as he was, Dr. Power knew the British Pharmacopœia very well. (Hear, hear, and applause.) Referring to physical tests, Mr. Will advocated Centigrade degrees alone, stated that the variations in physical constants are too large, and maintained that if work is done in a research laboratory it should not require corroboration. (Hear, hear.)

Mr. WM. MARTINDALE was not at all inclined to take Dr. Attfield's view of Dr. Power's paper. It was more in the nature of a report. He agreed that it was desirable to fix limits for impurity; he agreed with the U.S.P. in that, and he thought it was possible to be a little more systematic in the B.P. He could hardly believe it to be necessary for the chemical work of the B.P. to be done by the State. Better that it should be done by practical pharmacists. It was true that the German Pharmacopœia was revised by a State Bureau; but the result was not so satisfactory as in the case of the U.S.P. He thought Pharmacopœia-revision work should be carried on continuously from the publication of one edition to the appearance of another.

The PRESIDENT at this point suggested that speakers should confine themselves to topics mentioned in the papers.

Dr. GEORGE COULL said the paper was excellent; as to the bismuth estimation he had had no difficulty with the sulphide method, but the ignition method was liable to err as Mr. Alcock had pointed out, and one had to be sure of what the residue was. In regard to the caffeine-water question he thought that if the B.P. stated the amount of water that it should lose and no more, the thing would be right. He agreed that the U.S.P. method of describing tests was much better than the B.P.

Mr. F. HARWOOD LESCHER wished to make a patriotic remark, which was that business men when they wanted to know anything about which there was a doubt, turned up the B.P. first and took the U.S.P. along with them. (Applause.)

Mr. H. CONYNGHAM wished to say that Dr. Power's paper was a very valuable one. It showed that he knew a great deal about the Pharmacopœia. He did not wish to discuss the details of the paper, but there had been a good many prosecutions in connection with the Pharmacopœia and he thought they should welcome all criticism that helped to make the standards perfect. He also thought the men who did this research-work should be paid for it, with all due respect to some of those who had already spoken. Why should the young men use their time, and body too, in making these researches to hand them over to some person who clipped them up and got all the credit for them? (Applause.) It was not fair, although it had been done in other instances besides the Pharmacopœia. He thought the Conference was a very valuable body in bringing these things to light. (Applause.)

Mr. RUTHERFORD HILL said the author appeared to regard the U.S.P. as a better one than the B.P., and attributed it to the superior system which prevailed with the former. In reference to some of the criticisms being old, he would like to mention that Mr. Dott drew attention to the gallic-acid question, but Dr. Attfield, he thought, had not referred to it in his recent criticism. He would like to say that the wording of some of the paper was ambiguous; the author, for instance, said citrate of caffeine should be called citrated caffeine, but later on said that it became dissociated in the presence of water. In regard to morphine hydrochloride in cubic form, he did not know whether many were aware of the special process by which a lot of morphia was prepared; it was made into a magma of crystals, and cut up into 1-inch squares. There were also anhydrous cubic crystals<sup>1</sup>

Mr. CRIPPS said the impression in the minds of members was that the B.P. should give more explicit directions in monographs. It was not intended, however, according to his idea, to make the monographs of chemicals such that school-boys could use them; they were intended for men of experience.

Mr. MACEWAN said there was a difference of opinion in regard to the principles at stake. Dr. Power in his paper mentioned the advantages of fixing limits of impurity, and Dr. Attfield replied, that there was a great deal behind the fixing of limits in the B.P. in reference to those which might be dealt with under the Sale of Food and Drugs Acts. As they were aware, Dr. Power was responsible for the chemistry of the U.S.P., and from conversations he (the speaker) had had with Dr. Power, he had told him that the limits were obtained by getting large quantities of specimens from manufacturers, and on the open market, and determining what the limits in these samples were. In this way they got a good idea of what manufacturers could or could not let them have in commercial drugs. They also took advice as to increasing or diminishing the limits. The result was that the limits as fixed in the U.S.P. were actualities. He thought conditions like these should be considered in the compilation of the B.P. (Applause.)

Dr. JOWETT, replying, said there was one point he would like to make clear in regard to his own standing. The paper contained several matters of opinion which might involve differences of opinion, and it seemed to him that Dr. Attfield had spent most of his time on these matters of opinion and avoided matters of detail. On the principle that outsiders see the best of the game, he thought Dr. Power was in a peculiarly good position for impartial criticism of the B.P., and he noted also that the majority of the pharmacists who had taken part in the discussion considered the way of putting the tests in the U.S.P. preferable. As to the inclusion of references in the paper, there were not very many, and if left out would not make any great difference, and he might add the paper was finished before Dr. Attfield's criticism was heard of. In regard to the checking of results, he thought it was somewhat unusual to say that workers who had been many years over their work, and of whose *bona fides* there was no doubt, should have their work checked. He did not know in some cases that it would be possible to find persons who could check it, as such work would have to be done by a person of equal standing. Dr. Attfield said large sums of money would be required to make a perfect B.P., but chemists could not help thinking that a large quantity of the practical mistakes of the present B.P. could have been avoided if only the proofs had been submitted to some one experienced in those matters. In regard to the way of putting tests mentioned in the paper, no doubt Dr. Power preferred the U.S.P. method, but that was not the point. He mentioned that the B.P. method was not consistent; in some cases tests were given but the details left to the operator while under such an unimportant thing as sodium most exact directions were given. Mr. Tyrer had said manufacturers had large stores of information, and there was no doubt would be valuable to help the authorities to a large extent. As to Mr. Hill's remarks about the cubic crystals of morphine, Dr. Power mentioned that shape, but in the cubic crystals were needles; cubicle-shaped crystals could be obtained from alcohol. (Loud applause.)

The PRESIDENT having expressed his appreciation of Dr. Power's effort called for the next paper, which was

### Almond Oil and its Substitutes.

Messrs. W. C. ALLEN and E. THEODORE BREVIS, in their paper (page 160) on this subject, told the meeting all about the commercial aspects of almond oil, which is prepared exclusively from bitter almonds. They also gave interesting particulars about substitutes, and, speaking of the tests, showed that imperfect knowledge of the source of the so called "ol. amygd. persic." caused confusion regarding the tests for it. They make it quite clear, and add some particulars regarding the properties of the oils, and the behaviour of twenty-one distinct specimens of known origin towards reagents.

Mr. ALLEN read the paper and gave the members a general laugh. There were 60 or 70 present by this time. Mr. Brevis explained the tables, and samples of the almonds and the oils and substitutes were shown.



## DISCUSSION.

The PRESIDENT said there seemed to be a tendency to lower the quality of drugs now owing, he thought, to the influence of the stores. There was much sophisticated French almond oil in the market, due, he thought, to the fact that steamers plying between Syria and Marseilles picked up cargoes more or less mixed. Some steps ought to be taken to separate the seeds.

Mr. MARTIN PRIEST said, looking at the tables before him, he would like to point out that the mazagen oil stood out by itself. He also noticed that the Syrian kernel oil (No. 11) gave figures which corresponded rather closely with Nos. 2 and 9 almond oils, and it occurred to him that the almond oils might be easily contaminated with the Syrian oil without being detected. The nitric-acid test, it was true, gave different results, but he thought that a certain percentage might be added without much influencing the colour.

Dr. ATTFIELD asked if the nitric-acid test was in itself sufficient to detect adulteration in almond oil; it hardly seemed enough.

Mr. CRIPPS said the nitric-acid test was very trustworthy; it would readily detect 10 per cent. of apricot oil in almond oil.

Mr. BREWIS, in reply to Mr. Priest, said the nitric-acid test with Syrian oil gave a dark colour, which was deeper than when Bieber's test was employed; that in itself would prevent any admixture. The nitric-acid test was a good one, and he suggested either the addition of the Hübl test or some modification, or Hehner's thermal-bromine test. They might otherwise separate the fatty acids and take the melting-points.

The PRESIDENT said he noticed it was more difficult to distinguish peach-nut oil in almond oil than to spot apricot oil; the reason might be due to the fact that the apricot was plum, whilst the almond and peach were of the same family.

The next paper taken, and the last for the day, was on

**Strophanthus-seeds.**

Mr. P. E. F. PERRÉDÈS has minutely studied the structure of the Kombé strophanthus-seeds, and finds that all the characteristics which Dr. Blondel specified for distinguishing the kinds of seed from one another are to be found in seeds from one and the same pod. The conclusion to be derived from the paper (see page 163) is that the seeds cannot be distinguished from each other by their histological characters.

Professor Greenish manipulated the lantern wherewith Mr. Perrédès showed a number of excellent slides illustrating the structure of the seeds. These, Mr. PERRÉDÈS explained, after he had given the meeting a detailed history of the production of this medicine. The discussion was rather complimentary to the author, the PRESIDENT beginning it by saying that the work was worthy of a German professor of histology. We may explain that Mr. Perrédès is attached to Messrs. Burroughs, Wellcome & Co.'s scientific staff, and the research was instituted by them. Mr. HOLMES went on to say that the paper was a credit to the Conference, to the Society (in whose School Mr. Perrédès had been trained), and to Professor Greenish, who had taught him.

Professor GREENISH also joined with the President in complimenting the author, and said that he had had doubts as to the correctness of the descriptions accepted for the varieties of strophanthus-seeds.

Dr. SYMES asked if the author intended to extend the investigations to other species. That he thought was necessary, without the comparison there would be no means of telling what was the true kind of strophanthus.

Mr. J. R. HILL said he happened to know the work which Mr. Macfarlane had done on this subject for Professor Fraser, and he was sure that Mr. Perrédès had gone much more thoroughly into it. Commercial strophanthus-seeds had failed to germinate in the Edinburgh Botanical Gardens, and he judged from this that the seeds were of short vitality, which perhaps explained why so many parcels of strophanthus were practically inactive.

Mr. HAROLD WILSON also congratulated the author on his paper; and Mr. NAYLOR expressed the hope that Mr. Perrédès would do something with the sulphuric-acid test.

Mr. PERRÉDÈS then replied, stating that the sulphuric-

acid test depends upon the action on the albumen of the seed, and that varies so that to him it is not a reliable test.

After some further remarks Mr. Perrédès was thanked for his paper and the meeting adjourned.

**Third Session.**

On Wednesday morning, July 25, the President called the third session of the Conference to order. There were about thirty-five members present. Before the commencement of business

Mr. GLYN-JONES referred to a paper which came before the last Conference for discussion on the Pharmacopœia as a standard for drugs under the Sale of Food and Drugs Acts, but was held over by request. As there was a similar paper on the agenda this year, he wished to ask if there would be any possibility of this matter being discussed. They were told last year there would be opportunity for such a discussion, but as this paper was at the bottom of the list, he saw no possibility of it coming on, as there would evidently be no time with the great number of papers still before the meeting. He would like to ask the President if it would be desirable to divide the remaining papers into two sections, and discuss the two sections in different rooms.

The PRESIDENT said his feeling was that they would not be able to get through all the papers, and he would be glad to take the vote of the meeting on the matter.

Dr. ATTFIELD thought that there were many in the audience who were interested in all the papers, and would not care for such a division. (Applause)

Mr. RUTHERFORD HILL said he also thought they should go straight ahead with the papers. (Applause.)

A vote was then taken, but only seven votes were given for the division of the papers, and the meeting proceeded on the old lines. The next paper was on

**Indian Drugs.**

Mr. WILLIAM MAIR, referring to the "Imperial British Pharmacopœia," explained in this paper (page 170) why some Indian drugs are recommended in place of others, and gave information about several which deserve recognition for other parts of the Empire, especially kroat, fresh bael fruit, ispaghula, kurchi, mango-steen rind, papaw, jambul seeds, chaalmugra seeds, and *Adhatoda vasica* leaves. Galenical preparations of these were submitted.

The PRESIDENT explained that it was at his suggestion that Mr. Mair prepared the paper, as he thought it was desirable to get information from experts as to the relative quantities of the suggested drugs used in India by native practitioners. In regard to the use of the ispaghul or spogel seeds, he had recently an experience of its great use in diarrhoea in a case of six months' standing. Its action was due to the very gradual exudation of mucilage on the mucous membranes of the intestines. Mr. Mair said that no active principle had been found in the seeds, but he knew that an allied plant, *Plantago major*, had powerful effects. They would remember a recent paper by Mr. Hooper on *Adhatoda vasica*, in which reference was made to its germicidal properties.

Dr. ATTFIELD thought the paper proved that the General Medical Council were abundantly justified in putting forth the suggestions for the Addendum, and was glad to have the opinion of one who knew so much about India. He would like to say that the work referred to was only a report, and not even a draft; it was a sort of *ballon d'essai*. The question as to whether any important drugs were likely to be met with, the opinion he had formed from the perusal of scores of letters was that the whole of her Majesty's dependencies had been so well examined that there would not be. The idea of the Addendum was not to allow its use in this country at all, only in the colonies and India. As regards making some of the drugs official for use in time of scarcity, that was a matter for consideration. The General Medical Council were pleased to hear any suggestions that anyone might send on the report.

Mr. MAIR's reply to the points raised in the President's remarks was that the kroat was not an article of commerce in the same sense as chiretta was. The fresh-dried herb was to be obtained in Bengal in the autumn. With reference to ispaghul, it had been definitely determined that it contained neither alkaloidal nor glucosidal principles.

The PRESIDENT here mentioned that Sir James Haslett, M.P., was present, and he came forward to greet the leaders.



Mr. BASCOMBE was sorry he had not been able to finish the pharmaceutical preparation in time for the Conference, but hoped to read a paper on the purely pharmaceutical side of the question at an early date.

### The Ash of Drugs.

Messrs. MOOR and PRIEST have determined, or collated from friendly sources, a large number of ash-yields of B.P. drugs, and presented their results in detail, with here and there a recommendation (page 172).

The PRESIDENT said he had asked Mr. Moor to prepare the paper; especially to prepare the ash figures for those drugs for which ash-limits were not mentioned in the B.P.

Mr. J. C. UMNEY having asked a question, Mr. MOOR replied that he did not propose to allow over 2 per cent. of extraneous matter in cochineal.

Mr. W. C. ALLEN said the paper was a good one, and was one which would bear a lot of discussion had time permitted. With regard to the question of ash in drugs and articles of food, whilst it was desirable that the ash of drugs should be stringent, he did not think that it was always advisable to fix it in the case of foods. Take pepper, for instance; the highest qualities were prepared by rejecting every particle of the outside, but only the very elect were prepared to pay the price for it. If the husk were included they had to remember that it was difficult to get it quite clean. The rule of Somerset House—a very good one—was not to reject any sample on its ash alone.

Dr. ATTFIELD noticed that the quantity of ash in digitalis-leaves varied according to the fineness of the powder. At 65 meshes there was 11.5 per cent. of ash, and at 8 meshes 7.2 per cent.

Mr. ALLEN said that it was usual to treat the gruff which was the last to get powdered and had the most vegetable matter in it.

Dr. ATTFIELD: Hence the importance of mixing the various powders.

Mr. ALLEN: Yes, that is most important, not only in powdered drugs but in essential oils.

Mr. J. C. UMNEY noted that the powders which yielded the varying ashes at differing fineness all had strong mid-ribs.

Mr. RUTHERFORD HILL said these remarks on the varying ash of digitalis bore out some experiments he had in hand. He regarded the ash-determination as an easy preliminary way of indicating the qualities of drugs. He recently took a sample from a case of very fine asafetida and found it contained 32 per cent., which made him consider the absurdity of talking of the percentage of ash of that case of drugs; it was impossible to take a representative sample. Even in samples of picked tears there were considerable masses of sulphate of calcium concealed in the tears. He had found that tears yielded 1.6 per cent. of ash, never more than 2 per cent., which was always entirely soluble in hydrochloric acid. The ash-limit of asafetida might be raised with advantage, as the quantity used in medicine was so small. When required for medicine it should be the picked-gum resin yielding an ash of not more than 4 per cent. at the outside. The residue yield of the tincture might be fixed, as although the volatile oil was a valuable part of the medicine he did not find that it varied very much.

Mr. NAYLOR, referring to the remarks about cochineal, asked why it was that chemists sold the silver-grain variety, as it yielded much less colouring-matter and had more ash. As it was largely sold by chemists, he thought they were liable to prosecution.

Mr. WRIGHT: Chemists have to supply what their customers demand.

Mr. SAGE pointed out that araroba was largely judged by its percentage of ash, and used on that basis.

Dr. ATTFIELD said the paper was a most useful one for the compilers of the Pharmacopœia.

Dr. SYMES said he thought the fact that silver-grain cochineal was a penny a pound cheaper was the reason why it was preferred. (Laughter.)

Mr. J. C. UMNEY: Silver-grain cochineal can be had at any price, according to the amount of dressing.

Mr. BASCOMBE supported the suggestion to add a benzoic acid standard for benzoïn in the Pharmacopœia.

The PRESIDENT said as far as his experience went they could get either pure or adulterated asafetida, according to

the price paid. A Bombay merchant had written to him that he was prepared to supply any quantity of asafetida according to the Pharmacopœia. In regard to silver-grain cochineal, the grains looked larger and cleaner than the purple kind, which people had imagined had lost their bloom.

Mr. MOOR thought the natives might be induced to send the stones in separate boxes. (Laughter.) If they were added to absorb juice, a powder would be better instead of blocks of rock. In regard to asafetida tincture, four firms were at present supplying this standardised to 10 per cent. of total solids. In regard to grading pepper, no sample would be condemned on its ash alone. Some experiments made on the gruff of red pepper showed that the ether extract, ash, and fibre were identical with that from other parts of the pepper. Tincture of cochineal varied considerably in tinctorial property.

The next paper was on

### Jamaica Drugs.

Mr. T. H. WARDLEWORTH in this repeated some of his observations while in Jamaica, and illustrated his remarks with photographs (see page 177).

Dr. ATTFIELD opened the discussion by saying he would be glad to know if Mr. Wardleworth had met with any non-official drugs which seemed likely to be of use.

Mr. MARINDALE referred to his own visit to Jamaica, and said there were a great number of plants grown on the island, but the condition of the fiscal system of that country had a deterrent effect, as it was hardly paying its way. There were suggestions of obtaining revenue from the log-wood grown there, used largely in Portugal, he understood, in the preparation of wines. (Laughter.) He would like to ask Mr. Wardleworth if there were not some mistake in the number of cinchona-trees mentioned—namely, 22,000. He had the idea that the trees numbered a few millions some few years back. Guaiacum was largely grown, and he saw also pistaria growing and the cowhage-tree, but the great and particular product was the banana of a very fine kind, which was sent very largely and in huge quantities to America. He saw also the *Cactus grandiflorus* there in the Hope Gardens, and he believed it had a future before it in producing a valuable medicinal article if they could get it in sufficient quantity. (Applause.)

Mr. CLARIDGE DRUCE referred to the olive-tree. It was hardly to be expected, he thought, that the olive-tree, which was at its best on the Mediterranean, should do well and bear a large amount of fruit in such a humid atmosphere as that of the West Indian islands. He had noticed in Algeria that the trees which appeared to yield the largest amount of fruit were growing at an altitude of some 2,000 feet above the sea-level—from that up to 4,000 feet. Such trees, of course, when the winter arrived got the necessary period of rest which trees in tropical climates did not obtain. (Applause.)

Mr. GADD said the *Cactus grandiflorus* certainly yielded a valuable medicine. Some time ago there was a dispute as to whether the tincture from the dry plant had the same effect as that from the fresh plant. He had recently got a medical friend to make some experiments and he noted down some cases which he had treated with the tincture made from this plant, and from which he had obtained benefit. He understood that Dr. Gordon Sharp at Edinburgh, said some time ago that the plant was useless, and that equally good results could be obtained from such a demulcent as linseed.

Mr. J. R. HILL confirmed Mr. Gadd's references to Dr. Gordon Sharp's experiments, which, he said, were carried out at his suggestion.

Mr. JOHNSON, who had just returned from Jamaica, said he had great difficulty in getting the small samples of Jamaica sarsaparilla which he had sent to Mr. Holmes. During his stay in Jamaica he was in close touch with the Government medical officers throughout the island, and he heard of several cases of almost marvellous cures performed by the old native bush doctors after their own qualitative medical-practitioners had given up the case. There was a plant called "clary" which was said to be valuable as a not poisonous mydriatic. Other remedies were sand-box-leaves for rheumatism and fevers; "adrué," valuable in yellow



fer; "nickel," said to be of value in dropsical diseases, and many more. Mr. Johnson regretted he could not remember the botanical names with the exception of sandbox. (Applause.)

The PRESIDENT said one point which interested him was the abundance of colocynth in Jamaica. A larger amount might be sent to this country if it were differently treated than at present. But the London market did not care to receive drugs which were in a new form, and he recommended the colonial growers should adopt the usual treatment. Some time ago he had samples of cinchona from Jamaica, and he had come to the conclusion that they were not the best species of cinchona. They had a plant very similar to *Leveriana*, but it was not that species. He also referred to Dr. Gordon Sharp's experiments, and said he had supplied the gentleman with the samples which he had used, and he was surprised when he heard that the *Cactus grandiflorus* had no medicinal value. He thought it was a matter which would bear further investigation. In regard to sarsaparilla, if the gentlemen were going out to Jamaica he would remind them that botanists were very anxious to get specimens, and he hoped efforts would be made to send some home which would enable them to complete their research in this matter. (Applause.)

J. WARDELOWORTH, in reply, referred to a promise made to him by Mr. Johnson when he saw him in Jamaica, that he would contribute a paper on native remedies to the Conference—he might remind him of that promise now. (Applause.) Such an investigation might be of considerable service to Dr. Attfield for his Colonial Addendum. Dr. Nish, of the Leper Home, Jamaica, pursued an investigation on "adru," and had found it most valuable as a remedy for yellow fever, and thus a very valuable drug in those climates. He believed he was right in putting the number of cinchonates at 22,000. The bush doctors did not always rely on native remedies, and believed largely in the use of calomel combined with incantations. As to bananas, the growers were greatly handicapped by the difficulties of climate. To illustrate: one morning whilst there he was in the neighbourhood of large crops of bananas to the value of 100,000. Half an hour later that crop did not exist; it had been leveled to the ground and destroyed by hurricane. In reference to the dryness of the land, he said nine months without a drop of rain was the length of the drought last year, and that time certainly would provide sufficient dryness for any tree. (Applause.) The next communication was

### Laboratory Notes.

M. F. C. J. BIRD, in these "Notes" (page 176) shows that the B.P. test for liquor pancreatis lacks precision, and how to improve it by mixing an equal volume of the peptonised milk with ether and adding the nitric acid to this. He also proves that the  $\text{BaCl}_2$  test for ammonium is made sharper by the addition of ammonium chloride, and on the solubility of pepsin.

The PRESIDENT said Mr. Bird's papers always had some good in them, and they were always practical.

A. FARE corroborated that pepsin was not soluble as stated in the Pharmacopoeia. The addition of ammonium chloride in the sal volatile test was a very simple and effectual improvement on the test. Mr. Bird was polishing up the gems in that "casket of unpolished gems," to quote Dr. Attfield. (Laughter.)

M. CHARLES TYRER said that only that morning he had received a report on two samples of pepsin, both were returned as not soluble in alcohol. That was his general experience.

M. GERRARD had made some experiments with pepsin, and his conclusion was that the most valuable part was the portion insoluble in alcohol.

M. MARTINDALE asked if the portion soluble in alcohol was not peptone.

D. SYMES had made many batches of pepsin by Sheppard's salt process and with alcohol. He found that the portion soluble in dilute alcohol possessed little digestive properties. This had led him to think the alcohol test scarcely a suitable one in the Pharmacopoeia.

M. ALCOCK spoke of the centrifugal method of separating precipitates, which was suited for the rapidly precipitating barium carbonate precipitate in the sal volatile test. He was of the opinion that the well-known solvent properties of solutions of ammonium chloride would dissolve some of the barium.

Mr. WATSON WILL suggested that a volumetric test might be given. A gaseous estimation could first be made and then the solution filtered and titrated with barium chloride.

Dr. McWALTER said the liquor pancreatis of the Pharmacopoeia was so weak as to be quite worthless. The Pharmacopoeia committee, he believed, in deference to Sir William Roberts, embalmed the formula in the Pharmacopoeia. It seemed to him that Mr. Bird was taking great liberties with the test by adding ether; that was a radical alteration which would need the chemistry of the effect of ether on a mixture of nitric acid and milk to be looked into before it could be safely adopted. The pepsin of the present Pharmacopoeia of which 1 gr. was required to dissolve 2,500 gr. of albumen, was a very different preparation to the one originally introduced.

Dr. ATTFIELD desired to say that the liquor pancreatis was not introduced to embalm the memory of Sir William Roberts, but was added when a want was felt for such a preparation, and naturally they followed the work done on the subject by Sir William Roberts. He would like to mention that this kind of paper was most welcome. Mr. Bird's attitude was most loyal. The General Medical Council invited criticism on everything, it was only in that way they could arrive at perfection.

Mr. BIRD quite agreed that the valuable portion of pepsin was the insoluble one, as they could see by his figures. The sample which was not so soluble was the best. The modification of the barium test for sal volatile was merely put forward as a suggestion; and in reply to Mr. Boorne he would like to say that the test was quite sensitive, and responded when an extra c.c. of the test was added. As regards the solubility of barium carbonate in ammonium chloride, there was already ammonium chloride present, but he would rather they regarded his modification as a suggestion. In regard to Dr. McWalter's remarks that he was taking an unwarrantable liberty with the liquor pancreatis test, he would like Dr. McWalter to try the test side by side with the Pharmacopoeia one, and he would at once see the advantage of the method, and that the results were identical.

### Berberine Phosphate.

Mr. FRANK SHEDDEN has cleared up the uncertainty which has been about the formula for this salt; it should be  $\text{C}_8\text{H}_{11}\text{NO}_4\text{H}_2\text{O}$ . Incidental information is given in regard to the preparation of this and other salts of berberine, and of their determination by means of platinum chloride (p. 167).

There was no discussion, and

The PRESIDENT said that it showed that not much work had been done on the subject, and they were, therefore, more grateful to Mr. Shedden for bringing it forward.

In the next paper on

### Liq. Ferri Phos. c. Quin. et Strych.

Mr. HENDERSON, of Hitchin, reported that commercial samples of 1 to 3 liquor which are of proper strength are made with quinine hydrochloride, and it is impossible, he said, to make it full strength with the sulphate.

Mr. PARKER said the syrups of iron always gave pharmacists a lot of trouble, particularly when there was not a regular demand. There was no objection to the liquor for making syrupus ferri phosphatis, but a better plan for Easton's syrup was to make the syrup with all the ingredients but the iron, and add at the time of dispensing the equivalent quantity of liquor ferri phosphatis. The syrup made without the iron kept indefinitely.

Mr. ALCOCK asked whether the author had taken the sp. gr. of the liquors he had examined.

Mr. HENDERSON said he had not enough of the liquors left to take the sp. gr. after making two estimations. Mr. Parker's recommendation for Easton's syrup was the method recommended in Martindale's Pharmacopoeia. Perhaps glycerin and elixir of saccharin might be used in place of syrup. Mr. Henderson also pointed out the great danger to the patient of supplying syrups of varying alkaloidal strength.

### Recovery of Menthol.

Mr. A. W. GERRARD had a quantity of waste material containing a considerable proportion of menthol, tried to sublime it, and found the process slow. He then tried several solvents, and ether gave the best results (page 177).

Mr. PARKER asked if any difficulty was found in removing the mother liquor.

Dr. SYMES said the paper was practical and interesting, and of much value to menthol-cone makers, as it showed an easy method of purifying menthol, even in small quantities. The specimens before the meeting were very beautiful.

Mr. GERRARD, in reply, said there was no difficulty in removing the mother liquor. His way was to pierce the crust and allow the liquor to flow over the edge of the dish, afterwards placing the menthol on bibulous paper. He would like to hand the specimens to the Pharmaceutical Society's museum if they required samples. (Hear, hear.)

It was now one o'clock, and Mr. J. R. HILL suggested that they should agree to take Mr. Dott's paper on the B.P. as a standard for articles of commerce as the first item after lunch.

The PRESIDENT replied that he would put that to the meeting after lunch.

#### Fourth Session.

It was decided to take the papers as far as possible in the order they appeared on the agenda.

#### Preparations of Nux Vomica.

Messrs. E. H. FARR and R. WRIGHT communicated a critical note on the B.P. process for determining strychnine in nuxvomica preparations (p. 162). Harvey has already, in a paper communicated to this journal, shown that the official description contains sources of error, and the present authors appear to have gone carefully into Harvey's work, and agree generally with his criticism recommending that the volume of liquid preparations taken for assay should be halved, and that the wash water should be decreased. Incidentally they record interesting experiments on the solubility and crystallisation of brucine and strychnine ferrocyanides, especially the influence of stirring on the separation of the ferrocyanides.

Mr. H. WIPPELL GADD asked whether he understood Mr. Farr to say that the correct temperature at which the standardisation should be accomplished was 38° F.

Mr. F. C. J. BIRD said Messrs. Farr and Wright's paper was one of the most valuable that had yet been contributed to the Conference. The official process had caused doubt in many minds, and the point had not been satisfactorily cleared up until now. In his (Mr. Bird's) own experience he had found discrepancies in the process, and a short time ago a determination which produced results equal to 1.5 in the winter, only showed 1.3 when taken in the recent hot weather. He questioned, however, whether the process required as long as six hours. He thought a shorter period would be quite sufficient, in fact he had found results obtained at periods of from two to six hours practically identical.

Mr. C. G. MOOR agreed with Mr. Bird that two hours was quite long enough. He thought it also showed the weakness of the B.P. process.

Dr. ATTFIELD wished to say a few words on the general principle raised. The results given by Messrs. Farr and Wright did not so much constitute an amendment of the B.P. process, nor did he consider that they showed there was any absence of detail as Mr. Moor had suggested. But this brought up the general principle that full licence is given to analysts and pharmacists in the preface to vary the process in accordance with their ideas. Pharmacists, in consideration of their education, are thereby given full licence to vary the processes according as they find they want it.

Mr. MOOR asked, if that were so, might one vary the process of the B.P. altogether as, say, in the case of ipecacuanha?

Dr. ATTFIELD agreed with Mr. Moor, and thought analysts and pharmacists might, if they would, vary the processes altogether.

Mr. MOOR: That is to say, the so-called standard processes of the B.P. need not be adopted.

Dr. ATTFIELD: They need not be adopted, but the B.P. did not call them standard processes. It simply gave the best-known method of getting a certain result. Manufacturers were given certain freedom in the last B.P., just as by the present B.P. analysts were not restricted to the B.P. processes.

Mr. MOOR: That would be satisfactory if they gave certain results—they gave uncertain results.

Dr. ATTFIELD agreed with all Mr. Moor had raised, because he considered the paper of Messrs. Farr and Wright had adopted that tone. He considered that paper took the direction which the Medical Council desired pharmacists to go.

Mr. ALCOCK: What would happen if liquid extract of ipecac. were taken to the Court.

Mr. GLYN-JONES rose to a point of order, seeing how the discussion was tending, and

The PRESIDENT upheld the point and called on Mr. Farr to reply.

Mr. FARR, replying, said 80° F., as suggested by Mr. Gadd, was far too low; 100° F. was required. One hundred c.c. of wash at 38° would equal 18 milligrammes; while at 100° F. it would produce about 80 milligrammes. He did not agree that two hours was long enough for the process, as the behaviour of the precipitates was in many cases peculiar. In some cases two hours might be sufficient, but in many other cases it would be insufficient.

Mr. CHAS. TYRER then read abstracts of three papers.

#### Liquor Ferri Perchloridi Fortis.

Messrs. T. TYRER and A. LEVY have, in a lengthy research, dealt with on page 163, determined that it is impossible to make this liquor to answer the B.P. tests for gravity and iron content—viz., sp. gr. 1.420 and 1.6 gramme of  $\text{Fe}_2\text{O}_3$  from 5 c.c. Following the official directions strictly the sp. gr. comes out at 1.42479 and the  $\text{Fe}_2\text{O}_3$  yield is 1.424 gramme per 5 c.c. The authors examined numerous commercial specimens and report their results (not one strictly B.P.), also showing the official strengths of the liquor in other countries, and that the B.P. has fallen into error by adopting Franz's figure for the density of a 45–46-per-cent. solution of pure ferric chloride (p. 163).

#### Determination of Melting-points.

Messrs. T. TYRER and A. LEVY, continuing their work of last year, described several methods of taking melting-points, and the best of these with sketches of the apparatus are given on page 170 of *prog.* They also communicated the correct melting-points of five substances determined by five methods—viz., salicylic acid, 157.44° (B.P., 156–157°); salol, 41.42° (B.P., 42–43°); carbonic acid, 36.93° (B.P., 38–8°); menthol, 39.07° (B.P., 42°–43°); and thymol, 46.21° (B.P., 43.3°–51.7°). The melting-points are of commercial specimens; those of dried and purified are also given.

#### Turpentine and Terebene.

Messrs. A. WERTHEIMER and C. T. TYRER, with the view of throwing light on the variability of terebene (B.P.), distilled 62 lbs. of American turpentine in twenty-one fractions, and gave to the Conference detailed results of the experiment, stating percentage of distillate, sp. gr., optical rotation, and the refractive-index (see page 174) up to 162.5° C. The distillate (91.2 per cent. of the whole) was entirely dextrogyrate, and from 162.5° to 190° C. fractions were obtained (8.52 per cent.) which increased in levorotation with the boiling point. The characters of terebene made from turpentine by action of sulphuric acid vary not only with the turpentine, but with the amount of acid used. The authors proved that optical inactivity is the result chiefly of neutralisation of dextrogyrate and levogyrate bodies which are present, and they also dealt with the properties of French and Russian turpentine.

The PRESIDENT said the papers contained much excellent work, and must have taken an immense amount of time. The excellent extracts of the papers made by Mr. Chas. Tyrer showed that he was not only an excellent chemist, but an excellent pharmacist.

Mr. LLOYD HOWARD said he could bear out Mr. Tyrer on the question of terebene and liq. ferri perchloridi. He had found it was impossible to get liquor ferri to conform with the B.P. tests when made by the B.P. process. He had not had experience in fractionating dextrorotatory French turpentine, but in American turpentine he had found a mixture of dextro- and levorotatory compounds, which varied considerably, the older the turpentine the greater the proportion of the levorotatory fractions. There was a considerable proportion of a body present—it was not resin—which sometimes reached 5 per cent., but if it was harmless it might be left there. He was collecting some of this compound with a view of examining it. He was obliged to distil it by the slow steam process as the naked flame spoiled the terebene.

Mr. BIRD thought the Medical Council intended the ferric oxide content of liq. ferri perchloridi to be the test rather



tan the sp. gr. The starting-point was hydrochloric acid, which should produce a definite quantity of ferric chloride; he thought perhaps the large open pans used in manufacturing quantities might conduce to the evaporation of some of the acid. There was a letter in *THE CHEMIST AND DRUGGIST* a few weeks ago from a contractor in Ireland, whose tincture of iron had been rejected because it did not come up to the Pharmacopœia. He thought it was a shame that a man should be condemned when a drug was perfectly genuine. The investigation of terebene was an obscure subject; their knowledge on the subject was due mainly to Mr. Tyrer's papers, and what fell from his lips at the last Conference.

The PRESIDENT said he would like to call attention to a paper on American turpentine which appeared in the *American Journal of Pharmacy* last year, from which it appeared that various species of turpentine were used for distilling turpentine in different districts.

Mr. CHAS. TYRER, in reply, said that no doubt an excess of acid was unavoidable when working on a large scale, and proceeded to read a letter from a contractor whose drug contract had been terminated because his tincture of iron did not conform to the B.P., and in which it was stated that the B.P., 1898, was not of the slightest use to doctors, chemists, patients, or anybody. (Laughter.)

The PRESIDENT called on Dr. McWalter to read his paper on tinctures, but Dr. McWALTER said it was mainly figures, so that he would read it as the time was so short. It was on

### Tinctures

Mr. J. C. McWALTER has, in consequence of the criticism of his paper on the sp. gr. of B.P. tinctures, published in the *C. & D.* volume 9, carefully revised the figures which he then gave and communicated them to the Conference, adding weight of residue per oz. See page 160. Dr. McWalter pointed out that if such facts are to be given in the B.P. it will be necessary to bear in mind that the pharmacist cannot in the ordinary way get the best results obtained by the pharmaceutical expert.

### The B.P. as a Standard.

Mr. D. B. DOTT's paper on this topic was the one that a section of conference members were longing to hear and could not get published along as rapidly as they would have liked. Mr. Dott's paper was simply a protest against the misuse of the B.P. as a standard by petty prosecuting authorities, who by their incompetence to form a right judgment frequently cause the retailer to suffer unfairly. He suggested that no prosecution of that kind should be initiated without the sanction of some central authority, as the Local Government Board. Various examples, mainly from the *C. & D.*, were given to prove the mal-administration of the law (page 176).

The paper was read by Mr. NAYLOR amidst much laughter and applause, then the PRESIDENT complimented the author of the paper, and in inviting discussion said that it appeared to him that Somerset House or the Government should wish to have some standard on which to proceed.

Mr. GLYN-JONES said he had no doubt that all of them would admit that the B.P. as a legal standard could hardly be said to exist. (Hear, hear.) There was, so far as he knew, no one Act of Parliament that referred to the B.P. as a standard—that was the Pharmacy Act, 1868, section 15, and had not been able to find out that that section had ever been enforced. The 15th section referred to made it an offence for any person to compound a medicine of the B.P. other than according to the B.P. It was now well known that it was accepted as a standard by all the authorities and by all public analysts for medical prescriptions, and for household medicines. That recognition was the result of the efforts of the compilers of the B.P.—the General Medical Council—to get the B.P. so recognised. In 1890-91, in Dr. Attfield's reports on the B.P. were congratulations that the authorities had recognised the B.P. as a standard for medicines and articles which it contained that were sold as medicines. He thought that the compilers of the B.P. in seeking those powers should first of all have taken care that they were in a position to provide a standard that would be satisfactory. He thought it was their duty to provide something that would be as perfect a standard as possible. For the past two or three years the transactions of the Conference had clearly shown that the B.P. was

not satisfactorily compiled as a standard by which a man should be judged in a court of law with regard to these articles of medicine. Dr. Attfield in his last report on gelatin says that the Medical Council had always desired in the B.P. "to afford to the members of the medical profession and those engaged in the preparation of medicines throughout the British Empire, one uniform standard and guide whereby the nature and position of substances to be used in medicine may be ascertained and determined." If he, as a retail chemist, sold any article in the B.P. as medicine and was taken into court, if Dr. Attfield stood beside him to say that that did not actually mean what it said, it would be all right with him. He asked them what view otherwise would a magistrate take—certainly that the B.P. was the uniform standard whereby the nature and position of substances used in medicines might be ascertained and determined. Would he (the speaker) dare to tell the magistrate that he had heard Dr. Attfield say that the standards were not perfect by any means, and that a man might use any other processes that he wished.

Dr. ATTFIELD: For analysis.

Mr. GLYN-JONES: He thought that it almost amounted to a disgrace that the book which the Government of the country and the judges decided by was a book which Dr. Attfield had admitted was faulty. He had excused it on the ground that there were hundreds of workers behind the Pharmacopœia verifying the tests. It was said it would cost 20,000% to make it perfect—then he said that if the Government wished to judge him by it they must spend 20,000%. (Loud applause.) The Government should see that it was as perfect as possible, and should put the preparation of it in the proper hands. The General Medical Council was not a body to have the sole control to say what was the standard of saltpetre, say, when he handed it across the counter in the course of his business. Chemists, public analysts, and one or two of the law-officers of the Government should be in charge of its preparation—with an editor, of course—and they, as pharmacists, had a right to claim that they be consulted, and be paid for the work they did in providing the country with an efficient standard. The preface of the B.P. emphasised the fact that the book was only to be used for articles used in medicine. He wished, when the synonyms had been selected, that that idea had been kept rigidly in front of those who selected them. Saltpetre, according to the B.P., was an article which should give no trace of sodium. Dr. Attfield would say there are saltpetres and saltpetres. If it was wanted for medicine they must sell the B.P. article. But he (the speaker) wished to know what he as a chemist had to sell when the purchaser wanted it for fireworks or to salt bacon. (Applause.) Some little time ago a grocer was prosecuted because his beeswax contained 50 per cent. of paraffin-wax. The defence was that beeswax was not a drug, although in the B.P., because it was sold by a grocer; the magistrates upheld that view, and the case was dismissed. That case was taken to the High Court, and the judges said that when a chemist sold beeswax he must sell it without paraffin-wax. His competitor, the grocer, might sell it with as much paraffin or other wax in it as he liked. Was that a condition of things which they as chemists could look upon with anything but concern? (Applause.) It was chaos, and a kind of chaos that would go on as long as the Medical Council carried on the work. It had been said that no analyst would treat a chemist except in a liberal spirit. He had experienced during the last few months cases in which anything but a liberal spirit had been shown. Again, a chemist in the Midlands had been summoned because his tinctures did not come up to the standard. They had to go down to the court there and teach the analyst his duty at their own expense. The case was dismissed, but they had to pay their own costs. He contended it was the duty of the authorities to provide standards. Spirit of nitre was another case. They read that spirit of nitre when freshly prepared gave a certain strength, but that after the bottle had been occasionally opened it gave another strength. What was the poor magistrate to do in a case like that? The use of the word "occasional" was not justifiable. Had they a right to expect their wholesale houses to send them freshly-prepared spirit of nitre containing 7 volumes or containing only 5 volumes. Some certainly were sending out at 7 but others for profit were only supplying 5 volumes for

the purpose of extra profit. It was the duty of the chemist not to be satisfied by the present standards enforced against them in the B.P., but to see that the Government provided an efficient standard for them to be judged as to the merits of the articles they sold. (Loud applause.)

Mr. LLOYD HOWARD said the paper seemed to refer to "articles of commerce," which opened up a wider range than medicines. He thought there ought to be a plain statement in the Pharmacopœia as to what Acts it was a standard under. A magistrate ought to be able to turn to the book and see at once if the case came under the standard of the Pharmacopœia. To take the B.P. as a standard for articles of commerce was perfectly impracticable. Nineteen-twentieths of the cinchona-sales in this country would be illegal if it were. The same remark would apply to opium and to other commodities of which vast quantities were used in everyday life. A man required soda to scrub a floor with, it was not fair to expect him to buy pure crystallised soda of the B.P., and it would be unreasonable to expect him to pay the price. It was very desirable that the question of prosecutions should come before some well-constituted body in the same way as cases were undertaken by the Public Prosecutor.

Mr. RUTHERFORD HILL suspected that after all the B.P. was a standard. Take laudanum for instance: in case of a prosecution the only official definition of the drug in the British Statute-book was in the British Pharmacy Act, and a magistrate would have no option in the matter. It had been suggested that the public should be made familiar with the letters B.P. or P.B., as indicating a certain article. It was absurd to suggest that cream of tartar, when sold for domestic purposes, should be up to the medicinal standard, and the public should not expect to get that unless they asked for B.P. The only proper place for a standard for commercial drugs was in a schedule to the Sale of Food and Drugs Act, drawn up by the Government with the assistance of Somerset House. (Hear, hear.)

Mr. GADD thought the deterioration defence could be pressed too hard. No wholesale house ever sent out its sweet nitre at the minimum; they sent it out over the maximum, so that it could reach the retailer in good condition. In regard to the allegation that ipêcacuanha wine altered in character on keeping, experiments he had made showed that in a sample under observation identical analytical results were obtained at two analyses taken at six-month intervals. He did not think it was desirable to perpetuate such names as limejuice and glycerin, it was better to set about and re-instruct the public.

Dr. SYMES said it would be quite a misfortune if it went forth that the British Pharmaceutical Conference desired to lower the standard of B.P. articles. The paper was not concerned with the B.P., but with the judgments which were given when it was wrongly applied. The paper they had just read should rather have been read before Justices of the Peace; it would show them the mistake they were making. It was a serious matter that a man should be hauled up before a magistrate and convicted on an imaginary standard and ruined in the eyes of his customers. If it cost 20,000*l.* to make a perfect B.P. or to define their position it ought to be done. (Hear, hear.)

Dr. ATTFIELD said it concerned him a little as reporter to the Medical Council. He only wanted to say just one word—that Mr. Glyn-Jones and others must carefully distinguish between what the reporter of the Medical Council might say respecting household medicine and what the compilers of the Pharmacopœia, and even the editor, might say. They must carefully distinguish between what the reporter said and what the compilers and even the editor might think about what he said. He trusted they would see that there was a distinction there. He had, in the whole of his connection with the British Pharmacopœia since it was published in 1854, endeavoured, in his absolute loyalty to pharmacy, to show the Medical Council what the views of pharmacists were in relation to the sale of medicines. The Medical Council had never discouraged him from doing so. That was one thing, and it was quite another to say that the Medical Council producing the Pharmacopœia would be influenced by one word he said with respect to the sale of household medicines. The Pharmacopœia, whether British or London, Edinburgh or Dublin, as it was perfectly well known—whatever special pleaders and casuists might say, and however they might

interpret—that the producers of the Pharmacopœia were the College of Physicians. It was perfectly well known that their object had been to produce a book which should enable medical men and pharmacists throughout the country to uniformly carry out the wishes of medical men, and nowadays there was no difference, so far as he had been able to learn, in the attitude of the Medical Council towards the Pharmacopœia or pharmacists or the medical men of the country, or to the public. The Pharmacopœia would still be what it always was, whether British, or London or Edinburgh, or Dublin. In short, in relation to the subject of the Sale of Food and Drugs Act, the Medical Council practically had nothing to do. The Medical Council was anxious that pharmacists should produce the best possible preparations to further the medical man's objects—viz., curing disease to benefit the public. They never said a word or did a single act in the matter, and, notwithstanding whatever their reporter may have said in his reports, they had not said a single thing which should derogate from that position or alter it in the slightest degree. He did not tell them for an instant that the compilers of the Pharmacopœia—in other words the Medical Council—were opposed to anything they might do in carrying out the question of the sale of food and drugs to the public. He did not say that the Council gave them support. He only said it was not their business. It was the business of the pharmacists, and the more attention they gave to the subject the better, in his humble judgment as the reporter—the better not only for themselves, but for the medical men and for the public. (Cheers.)

Mr. GLYN-JONES: But why are saltpetre and sweet nitre given as synonyms? I wouldn't think much of a medical man who used those terms in prescriptions.

Dr. ATTFIELD said there were a few synonyms in the Pharmacopœia which had been put there at the wish of a few parties, and now that attention had been drawn to the matter, they might be taken out. In 1885 there was a strong opinion that strings of synonyms should be added. He had done his best as an old pharmacist to bring the matter of the paper before the Medical Council.

Dr. COULL would not like to see synonyms deleted; laudanum, paregoric, and camphorated oil were well-defined substances, and they ought not to delete the synonyms.

The PRESIDENT said he took it that as long as the synonym referred to medicine only it could be left, but when otherwise it had better be left out.

Mr. MOOR could not think of any article of commerce which had been ruthlessly condemned by analysts; pharmacists had no grievance in that respect. The Pharmacopœia could not be a standard under the Sale of Food and Drugs Act, as the Act was later than the Pharmacopœia. Honest men would not object to having their goods tested, but the did object to having snippings of information pasted in the book, and set before them as a standard.

Mr. DRUCE said he was often in an anomalous position in that he was chairman of a sanitary authority. Recently the inspectors of a certain district had laid before the committee a lot of samples of "Magnesia," more or less neatly wrapped up. Most of the samples were carbonate of magnesia, and it was his duty to explain to the committee that when the public asked for magnesia they did not want heavy or light magnesia of the Pharmacopœia, but carbonate of magnesia. He would be sorry to see the synonyms deleted. He complimented the author on the racy paper, and, like him, could not see why beeswax polishing a floor should be pure when bought of a chemist and mean something else when bought of a grocer. (Laughter.)

Mr. WALTER HILLS said these discussions were of great interest, and taught them that the closer they got in contact with the medical profession on this matter the better. It might be a long time before their proper position was recognised, but they could do a lot by close personal contact with sitting round one table. They had years of work before them and would invite criticism when the results were ready.

Dr. MCWALTER said there was no possible chance of Government granting 20,000*l.* towards fixing standards of getting the public to say they wanted an article of purity than the pure. The difficulties might be got over by taking care with the descriptions calling the Pharmacopœia cream of tartar "purified" and so on. He would like to call attention to the positive danger pharmacists were being required to sell belladonna-plasters of 0.5-per-



aloidal strength when not ordered by a doctor's prescription. He had known serious results to ensue, and a chemist might lay himself open to an action for heavy damages.

The PRESIDENT moved that a vote of thanks be accorded to the author.

The following are abstracts of the papers taken as read:—

#### Mercurous Iodide.

Dr. F. B. POWELL, calling attention to the Canadian suggestion that yellow mercurous iodide should be included in the B.P. Colonial and Indian Addendum, stated that there is still a good demand for this iodide. He contrasted the old green iodide with the equivalent yellow one, prepared by precipitation, and gave abundant experimental data in proof of his assertion that the yellow iodide prepared by Henry MacLagan's precipitation process keeps perfectly. The paper is on page 164.

#### Copaiba.

Dr. E. WIGHTMAN BELL communicated two papers on this subject (see page 166). In the first he reported on an analysis of British Guiana copaiba, showing that it answers all the characters in tests of the British Pharmacopoeia. In the second paper commercial samples of copaiba were reported upon somewhat fully. Mr. Bell left the impression that copaiba is at present not sold in quality, there being a suspicion of gurgum balsam about it.

#### Phenol Suppositories.

Dr. F. R. DUDDERIDGE showed in a brief paper that there is no need for adding white wax to oil of theobroma in making phenol suppositories; it raises the melting-point without stiffening the mass. All that is necessary is to melt the oil of theobroma at low temperature, omitting the wax, whereby a harder suppository which melts 20° C. lower is obtained (see page 167).

#### Gum, Olive Oil, Saccharin, and Essential Oils.

Dr. EDWIN DOWZARD sent four notes to the Conference (see page 163). The first was a protest against the standardisation of powdered opium, as from the analysis of twenty-five specimens of dried and powdered drug he found the morphine percentage ran between 12.3 and 14.9. The second note contained useful facts for olive oil, fifty-two specimens being dealt with, and the sp. grs. and refractive indices given. The stronger saccharin is more soluble in acetone. On that fact Mr. Dowzard bas a simple method of telling the strength of the article purchased. In the fourth note he showed that the viscometer may usefully be employed for telling whether essential oils are adulterated or not. The method seems specially applicable to lemon and similar oils.

#### Estimation of Chlorine and Nitrogen.

Mr. J. F. TOCHER described an apparatus constructed entirely of glass which can be used for assaying lead peroxide, and for estimating nitrogen by Kjeldahl's method. It is figured and described fully on page 175.

#### Prepared Asafetida.

Mr. H. W. JONES proposes to purify asafetida without losing essential oil by pouring the alcoholic solution of the gum resin into water acidulated with hydrochloric acid, collecting the precipitated resin and drying in the air. The product is excellent.

Mr. WARDLEWORTH then moved that the following should be adopted as

#### THE FORMULARY COMMITTEE.

Messrs. N. H. Martin, W. Martindale, A. C. Abraham, Peter Boa, F. C. J. Bird, W. A. H. Naylor, F. Ransom, Harold Wilson, Harry Wilson, R. Wright, and C. Symes. He caused some amusement by pointing out that he was asked, according to his paper, to elect the "Rev. A. H. Naylor."

Mr. GADD said he had much pleasure in seconding. The formulary reminded him of a story in "An Evening with Punch." A guest at a tenant-farmers' dinner, receiving a liquor in a glass, called a waiter and said, "Young man, bring in some of that in a mug." (Laughter.) Like Oliver Twist they wanted some more. Mr. Martin had been a very active member of the Committee, and had sent elaborate forms all over the country to be filled up by people who he thought might give him some information.

#### PLACE OF MEETING NEXT YEAR.

Mr. BEGGS said that it would be within the recollection of most of the members who visited Plymouth last year, that he, in conjunction with some of his colleagues, came over with

the express intention of giving an invitation. They knew at that time that it could not be accepted—(laughter)—but they did not offer because of that. But, being Irishmen and always wishing to be at the front—(cheers)—they gave that invitation so as to be in the front this year. They were there to-day to ask the members of the Conference to again visit Dublin, and he offered them a hearty welcome on behalf of the chemists and pharmacists of Dublin and the south of Ireland. He felt that the task before them was a large one, but, as he mentioned at the outset, the Irish would tackle anything. (Laughter and cheers.) If they came to Ireland they would have a complete change from what they had there in London. (Cheers.) He had considerable influence with the clerk of the weather, and they had had such an amount of melting-point that he had determined to leave it out of their formula for next year. If they came he was positive that he could offer them, on behalf of Dubliners, a most cordial welcome. Their city was well known for its hospitality. They were poor—(laughter)—but they had very large hearts. They had not many manufactures in Dublin, but they had a few which appealed—should he say, to the taste? (Laughter.) They made good whisky and, going a little lower, they had stout. They could show some flourishing manufactures in that line. (Laughter.) Unfortunately, their shipping industry had been taken away, and had gone to their brethren in the North. As regarded scenery, they were within half an hour's drive of the garden of Ireland. Nothing would be left undone to make the visit to Ireland a success; they had already approached the chief magistrate of the city, and he had promised to receive them if they came, and should he not be in office his successor would follow. (Laughter.) He would follow in the good intentions. (Loud cheers.)

Mr. KELLY said it was with great pleasure that he supported the invitation, and to the bachelors present he would very much like to give a word of warning. Dublin was noted for its magnificent scenery and the beauty of its females. It was the capital of a land which manufactured the generals who had unfurled the British flag, and had placed it in the forefront in South Africa. (Cheers.)

Mr. CUNNINGHAM said that if they came to Dublin they would be well entertained. The fresh air of County Wicklow would benefit them all far more than the hot air of the factories and the smoke of shipbuilding yards. He hoped they would come.

The CHAIRMAN said when he had the pleasure of enjoying the hospitality of Irishmen in the North of Ireland, he felt satisfied that the Irishmen in the South would want to see whether they could not outvie their compatriots. They would, he thought, act very unwisely if they, as a Conference, did not accept the very kind invitation held out to them. He heartily hoped that he would be able to go.

Mr. UMNEY said that Mr. Beggs might be well assured that they would accept the invitation. (Hear, hear.) He thought the bachelors might be permitted to go and take their chance. He moved that the invitation should be accepted with the greatest cordiality. He hoped that they would enjoy themselves as much as they did at Belfast.

Mr. HILL expressed his sincere pleasure at seconding the resolution proposed by the last speaker. He had had the good fortune to be connected with one of the largest pharmaceutical establishments in Ireland. He had had opportunities of seeing the country and experiencing the vivacity, good humour, and abounding hospitality of the Irish people. He was sure they would receive a royal welcome, and they knew, from a very illustrious incident quite recently what a royal welcome in Ireland meant. He hoped they would see and realise, perhaps in connection with that visit of theirs, a better and truer feeling than had ever yet been realised. If he might presume to alter the words of a well-known poet:—

"It's coming yet for a' that  
When pharmacists these islands o'er  
Shall brothers be for a' that."

The PRESIDENT put the resolution to the meeting, and it was carried with cheers.

Mr. BEGGS said he was exceedingly pleased that the invitation had been accepted. As was known they had worked their best for pharmacy on their side of the Channel. They had done their duty with regard to those obnoxious clauses—(cheers)—and he thought when they came to Dublin they

would find that there was no variance between them. They ought to be altogether. (Cheers.)

#### ELECTION OF OFFICERS.

The following officers were elected for the ensuing year:—

President: G. C. Druce.

Vice-Presidents: G. T. W. Newsholme P. Boa, G. D. Beggs, Professor Tichborne.

Treasurer: J. C. Umney.

Hon. Secretaries: F. Ransom, W. A. H. Naylor.

Auditors: Messrs. Grindley (Dublin) and Mathews (London).

Other Members of Executive Committee: Messrs. Atkins, Bird, Collier, Warren, Greenish, White, Peck, Collard (Dublin), and Farr.

Mr. ATKINS moved a vote of thanks to the local committee.

Dr. SYMES seconded the motion and the Chairman heartily commended it.

The motion was adopted and Mr. Martindale replied shortly.

Mr. W. C. ALLEN proposed a vote of thanks to the Pharmaceutical Society and Council for allowing the use of the house and rooms of the Society for the Conference meetings.

Dr. J. C. McWALTER (Dublin) seconded the vote, which was accorded with acclamation.

#### THE 1902 MEETING.

MESSRS. CUMMING and NAYSMITH, from the Forfarshire and District Chemists' Association, tendered a hearty welcome to the Conference to meet in Dundee in 1902. (Applause.)

The PRESIDENT thanked these gentlemen for their advance invitation, and intimated that they should follow the usual rule of reiterating the invitation at the next annual meeting.

#### THANKS TO THE PRESIDENT.

Mr. W. MARTINDALE proposed that a hearty vote of thanks be given to Mr. E. M. Holmes for the ability and courtesy which he had displayed in conducting the proceedings of the Conference. The President had performed his part impartially, and carried it out with courtesy. (Applause.)

Mr. CLARIDGE DRUCE seconded the vote and referred to the President's work in materia medica and botany in many happy phrases.

The vote was carried amidst loud applause.

The PRESIDENT in returning thanks spoke in high terms of the work of the Executive Committee, and the great ability displayed by them in the arduous labours of the Conference matters. Especially he referred to Messrs. NAYLOR and RANSOM (Hon. Secs.), and Mr. J. C. UMNEY (Hon. Treas.).

Mr. S. R. ATKINS proposed that the hearty thanks of the Conference be given to Messrs. NAYLOR, RANSOM, and J. C. UMNEY for the splendid way in which they had carried out the serious arrangements for the meetings of the Conferences. Mr. GOWEN CROSS seconded, and those gentlemen having suitably replied, the last session of the Conference came to an end.

#### THOSE PRESENT

are expected to sign the book. We have copied the names as well as we could, considering that some chemists on holiday write worse, if anything, than do prescription-writers. By no means all signed the book. We have added the names of a few whom we know to have been present. Some signed more than once.

Alcock, F. H., Birmingham  
Allen, C. B., London  
Allen, W. C., London  
Anderson, A. B., and Mrs.,  
Dundee  
Anderson, J., Dundee  
Andrews, F., London  
Ashton, F. W., Hitchin  
Atkins, S. R., Salisbury  
Atkinson, L., Brookley  
Atkinson, L. A., and Mrs.,  
London  
Attfield, Dr. J., and Mrs., Wat-  
ford  
Bascombe, F., London  
Beggs, G. D., and Mrs., Dublin

Bell, C. B., Hull  
Bird, F. C. J., London  
Blackburn, A. E., Leeds  
Boorne, H. E., Bristol  
Bourdas, J., London  
Bowen, J. W., London  
Branson, F. W., Leeds  
Brembridge, Elias, London  
Brembridge, R., London  
Brewis, E. T., London  
Bridge, G. E., and Mr.,  
Bournemouth  
Browne, F., Hong-Kong  
Brunt, G. H., Birmingham  
Buck, A. S., Liverpool  
Butt, E. N., London

Campkin, B. S., Cambridge  
Carr, J. B., Edinburgh  
Carteighe, M., London  
Carter, R. H., London  
Chalmers, W., London  
Clague, R. Maltby, Newcastle  
Clark, Dr. Inglis, Edinburgh  
Collier, H., London  
Conyngham, H., and Mrs.,  
Dublin  
Cooper, Albert, London  
Coul, Dr. G., Leith  
Cowie, W. B., Edinburgh  
Cracknell, H., London  
Crawshaw, E., London  
Cresswell, F., London  
Cripps, R. A., Hayward's Heath  
Cross, W. G., Shrewsbury  
Cummings, W., Dundee  
Currie, W. L., Glasgow  
Dampney, R. C., London  
Davidson, A., Montrose  
Davis, F., London  
Druce, G. Claridge, F.L.S.,  
Oxford  
Duncan, Wm., Edinburgh  
Dyson, W. B., London  
Ekins, A. E., St. Albans  
Ellinor, G., Sheffield  
Evans, Ed., jun., Liverpool  
Everson, H. C., Modbury  
Everett, J. E., Windsor  
Farr, E. H., Uckfield  
Fielding, P. J. D., Cork  
Finemore, H., London  
Ford, James, Kirriemuir  
Ford, Miss Jessie, Kirriemuir  
Forster, G. F., London  
Fox, A. R., and Mrs., Sheffield  
Francis, A., London  
Fraser, J. L., Edinburgh  
Gadd, H. Wippell, Exeter  
Gadd, S. C., Exeter  
Gasson, W., Kimberley (S.A.)  
Gerrard, A. W., London  
Gibson, Adam, and Miss, Edin-  
burgh  
Gifford, R. L., and Mrs., Black-  
burn  
Giles, Wm., Aberdeen  
Glyn-Jones, W. S., London  
Goldfinch, G. S., Hendon  
Grier, J., Manchester  
Grose, N. M., Swansea  
Grossman, E., London  
Gulliver, W. F., London  
Hall, H. E., London  
Hanson, A. W., Sidcup  
Harrington, J. F., London  
Harris, E. W., Merthyr Tydfil  
Heap, J. H., London  
Heaton, J. A., Burnley  
Helbing, H., London  
Henderson, H. J., Hitchin  
Hobbs, A. E., Tunbridge Wells  
Holding, J., London  
Horne, W. L., London  
Howard, D. L., Stratford  
Howie, W. L., London  
Hughes, J., Swansea  
Humphrey, John, London  
Hyslop, J. C., London  
Innes, D., Stalybridge  
Jack, J., Arbroath  
Jackson, Mr., Mrs., and Miss,  
Bradford  
Johnson, J. R., and Mrs., London  
Johnston, John, Aberdeen  
Johnstone, C. A., and Misses,  
Manchester  
Jowett, H. A. D., London  
Kemp, H., Manchester  
King, Alec. W., Mandalay  
Kirkby, Wm., Manchester  
Lakemen, H. F., Modbury  
Latchmore, A., and Mrs.,  
Hitchin  
Lenton, W. H., London  
Lewis, S. J., London  
McCorquodale, J. C., Markinch

Macdonald, A., London  
MacEwan, Peter, London  
McWalter, Dr. J. C., Dublin  
Mair, W., and Mrs., Edinburgh  
Marsden, P. H., Liverpool  
Marsh, E. P., London  
Martindale, W., and Mrs.,  
London  
Martindale, Dr. W. H., London  
Mathews, H., Oxford  
Mathews, J. H., London  
Merson, G. F., and Mrs.,  
Newcastle-on-Tyne  
Michie, J. P., Edinburgh  
Miles, G. J., London  
Minchull, Rose  
Moor, C. G., Exeter  
Naysmith, A., and Mrs., Ar-  
broath  
Newsholme, G. T. W., Sheffield  
Newton, A., Accrington  
Nicholl, L., Belfast  
Nidd, J. A., Manchester  
Norman, V., Godalming  
Peck, F. J., Hitchin  
Peck, E. S., Cambridge  
Perrédis, P. E. F., London  
Philp, W. J. I., London  
Phillips, A. J., London  
Pidd, A. V., and Miss, Man-  
chester  
Poole, J., Birmingham  
Pretty, C., London  
Priest, Martin, London  
Ransom, F., Hitchin  
Rees, R. P., Dowlais  
Robertson, G., Partick  
Robinson, R. A., London  
Robinson, W. F., London  
Rose, J. D., Jarrow  
Rossiter, F., St. Leonard's  
Sage, C. E., London  
Sangster, Arthur, Hampstead  
Shenstone, J. C., Colchester  
Shorrocks, R., and Miss, Darwen  
Sillitoe, H. A., London  
Silson, R. W., Bradford  
Simpson, Miss, Arbroath  
Smith, F. A. Upsber, London  
Smith, John, Liverpool  
Smith, W. R., Liverpool  
Smithson, J., and Mrs., Brighton  
Smithson, Miss, Brighton  
Solomon, A., London  
Southall, Alfred, Birmingham  
Spinney, F., Bournemouth  
Squire, George, Sheffield  
Stephen, G., London  
Stocks, D., jun., Edinburgh  
Strother, C. J., London  
Strother, Miss, Chiswick  
Swinton, T. H., Bootle  
Symes, Dr. Charles, Liverpool  
Taylor, G. S., London  
Thompson, C., Birmingham  
Toone, J. A., Bournemouth  
Toone, A. H., Exmouth  
Turney, J. D., Plymouth  
Tyrer, C. T., London  
Umney, J. C., London  
Wallis, T. E., London  
Walsley, M., Edinburgh  
Want, W. P., London  
Ward, J. S., London  
Wardleworth, T. H., Liverpool  
Warren, W., London  
Watson, J. E. W., Norwich  
Wellcome, H. S., London  
Whigham, R. L., London  
White, Ed., London  
Wiggins, H., Sydenham  
Will, W. Watson, London  
Wink, J. A., London  
Woods, A. H., and Mrs., Ply-  
mouth  
Woolley, S. W., London  
Wootton, A. C., London  
Worfolk, G. W., Ilkley  
Wright, A., Yeovil  
Young, J. F., New Barnet



# The Pleasantries

The reunion was begun on Monday evening with a brilliant reception at the Whitehall Rooms, Hôtel Métropole, by the President and Mrs. Holmes. The gathering was a large and representative one, and successfully broke the ice for the next few days' proceedings. Leaders of pharmacy jostled humble craftsmen in the scramble for cooling drinks and strawberry ice, while Bloomsbury dignitaries beamed benignantly and dined affably as the evening wore on. In the Banqueting Hall the Lawler String Quartette discoursed seductive symphonies, while vocal and musical contributions were

to me as if the trumpet-blast had announced the arrival of the victim, and the whole gathering were waiting to massacre me.

All they gave me wherewith to protect myself was a souvenir, and just as I was preparing to receive the combined onslaught of some infuriated editors something happened—music it was that happened to come forth from the throats of a glee-quartet. Music soothed the savage breasts of all, with the exception of those of the singers.

I greeted Mr. Holmes, the good friend of my student-days, the supporter of the P.A.T.A., the Curator who combines widespread knowledge of drugs with a smattering of businesslike common-sense, and I had begun to pity people who are forced by adequate remuneration to sing in such a Babel, when Mrs. Jones sailed up and drew me aside.

"I'm so glad you've come, Mr. Irresponsible. Isn't it warm? Why, there's my old friend Mr. Brown, his face gets redder and redder. Oh! just look at Mrs. Smith, isn't it simply awful the dead set she's making on that good-looking young man, and with that crowd of daughters too. I think it's most unbecoming I shall go over and—"

[Exit Mrs. S.]

\* \* \*

The next individual I had the pleasure of talking to is even a greater cynic than myself. He has a craze for associating the appearance of a man with his trade. He cites, for example, the characteristic "doctor's walk," the "engine-driver's face," the "sailor's gait," and so forth. He fell to criticising the chemists. They looked, he said, as if they lived on their wares. He pointed one out to me, one that was like a dried root—twisted and withered and contorted, and others that were "seedy," "herbaceous," and "woody" chemists; chemists of the consistence of a pill mass; others that were fatty like ointments or plasters, "distilled water" and "spirituous" chemists. One or two were undoubtedly like an acetic extract, and the faces of others again reminded me of the effects of ipecacuanha wine. Few alone were really full-blown animal extracts like Mr. Brown or Mrs. Smith.

We came to the conclusion that the young ladies ought to be properly divided and labelled in their orders and sub-orders—some belonged undoubtedly to the graminaceæ—woe— and others were unmistakably of the urticaceæ. Many might have been liliaceæ and rosaceæ; some were certainly cupifidifera, labiateæ, but when my friend stated he had got some solanaceous and papaveraceous young ladies in his vasculum, I thought well to leave him, and thence I came to the wife of a large chemical manufacturer.

"Yes, one has to come to these wretched affairs you know—it's a beastly nuisance, but I always tell Charles it has to be done to keep in with the customers and to get on in life" (here I smiled to my inmost self—the woman was entirely responsible for her husband's success—oh, these foolish married men! They do not seem to realise that their wives work for their own trailing graceful skirts, bespangled bodices, and new muslin hats. How many a case does one know in which the man has been unconsciously bent into shape by his adored wife—like a reed under the influence of the wind. But I am not a mysogynist. All this should be).

\* \* \*

Then I found a timid little lady, who greeted me with "Oh, you know Mr. Sparrow is going to read a paper to-morrow—I'm so nervous—I don't know what to do; do you think they will criticise him very much?" "Oh, no," I said, "they never do that—chemists live in such perfect harmony."

"Yes, yes," she replied, "but there's that nasty weekly paper—what do you call it?—(I really didn't know which)—they are always saying such nasty things about Henry, and he really isn't strong enough to bear it —"

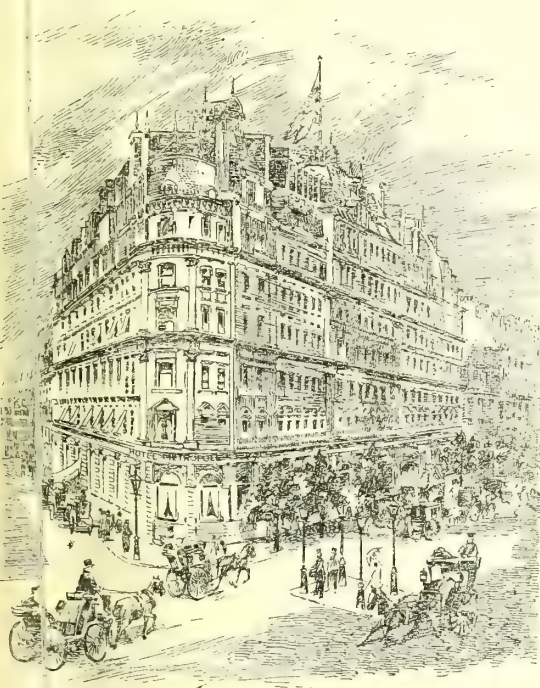
"Oh, he'll get on all right I am confident, Mrs. Sparrow. You'll excuse me, won't you? There's an old friend of mine that I haven't seen for years."

Up comes an analyst.

"Oh no, I can't possibly read my paper—far too busy, don't you know—shall get Naylor or somebody to read it for me."

"I say, old man, are you interested in arsenic?"

"Rather," I replied. "Why, I've done nothing but test for



HOTEL MÉTROPOLE—THE HEADQUARTERS OF THE CONFERENCE.

conducted to the Victoria Room. The singers comprised Mesdemoiselles Maud Ballard and Florence Hoskins, and Messrs. Vivian Bennetts and Thomas Lawler. The instrumentalists were Mesdemoiselles Marion Savage, Emily Wayfield, Sybil Maturin, Dora Thorpe, and Blanche Walker as accompanist.

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THE IRRESPONSIBLE CRITIC, famed for delightful cynicism on pharmaceutical things in general, has been attending the conference, and this is how he tells the world what he thinks of it all:—

The melted asphalt oozed like mud from under the hoofs of my ornate cab-horse, as it toiled through the City to the Whitehall Rooms on Monday night.

Assuming the air of an American oil king, I stepped into the entrance-hall of the Métropole, and strode through the little group of arm-chair loungers.

The waiters there, by reason of their foreign origin, speak good English, and they passed me along, upstairs and downstairs, and finally into the arms of the burly "caller" at Lloyds.

As he later bellowed my patronymic away into the rafters and bowels of the building my heart sank within me, and it was



er eric for weeks—started at the roof of the place, you know, and worked solidly downwards. My analysis-journal is full of it."

"Why don't you read a paper on your experiments?"

"I will if you like," I said. "My notes are in my pocket."

"Yes, we'll have some abstracts now, with coffee and cigars."

We left the gay company and adjourned to a quiet corner, and I read at the request of the assembled few.

We keep the Irresponsible's "paper" until next week. In it he records remarkable results.

\* \* \* \*

On Tuesday afternoon a most successful garden-party was held in the Royal Botanic Gardens, Regent's Park, N.W. It was not till five o'clock that the gardens began to fill, the visitors being received by Mr., Mrs., and Miss Martindale. The weather, it is needless to say, was splendid, and the shade of the magnificent trees was utilised to the full, tea being taken at little tables placed in the shade. At about five o'clock the news of the dropping of Clauses 2 and 3 of the Companies Bill was brought by two Conferencers who had left the House in a hansom cab, and it spread from group to group in a few minutes. The hearing of the news seemed to give the finishing touch to the enjoyment of everybody, and the enjoyment grew to hilarity. Then came the taking of the group-photographs, which are always such a feature of the Conference. After much arranging everybody

which frost penetrates to be definitely settled, as a greater depth than 3 feet has never been recorded.

The museum contains many interesting specimens, several of the products shown being of immense economic importance. Many country visitors were agreeably surprised to find such a beautiful oasis in the midst of London, and everybody came away satisfied with the afternoon's entertainment.

To give the many pharmacists and their wives unable to be present an idea of the scene we have asked a lady expert to give us her impressions of the dresses, which she does delicately introducing a description of the gentlemen's clothes—a matter which usually escapes attention when similar functions are chronicled. We ought to mention that the band of the 2nd Life Guards performed during the afternoon.

\* \* \* \*

IT IS WELL-KNOWN or should be that the staff of the CHEMIST AND DRUGGIST includes a number of the fair sex. In fact this office was the first in London to give employment to women. That is by the way, and we merely mention the fact because it was one of the prettiest of our ladies who went to the garden-party in the Royal Botanic Gardens on Tuesday afternoon. Here follows what she has written:—

All the members of the Pharmaceutical Conference looked charming, of this there could be but one opinion. The regulation black coat was generally adopted, but as the individual wearer lent it a special style it could scarcely be recognised as a uniform. Some of these coats were seen to open over white or light waistcoats, which, although learn on good authority are not really cool than cloth ones, have the advantage of looking so, and, moreover, to men of fair complexion are eminently becoming. Ties worn were in the best possible taste. The style of hats varied; some donned big straws or felts, whilst others wore silks; a yachting cap was noticeable, the wearer of which certainly looked decidedly at home. Amongst those present were Mr. Warr who wore a well-fitting frock-coat, grey trousers, blue and white spotted necktie and pink carnation; Mr. Holmes was attired in grey felt hat, grey trousers, and puttees; Mr. Hills in white waistcoat, straw hat, grey tie, and check trousers; the conventional completely to the wind; Mr. Newsholme wore a cutaway coat. Mr. Newsholme had on a tightly-buttoned frock-coat, a pair of white waistcoat, and grey trousers, was about eating ice-cream.

\* \* \* \*

There is not the slightest doubt that women folk must now be content to take the second place in the world of fashion, the description of men's attire is becoming more and more a feature of modern journalism. The report of the Paris International Congress of Pure Chemistry was complete without the account of the costume worn—i.e., "suits, hats, alpaca coats, and duck trousers." The facial charms as well as the sartorial are noticed too—thus we read that Mr. Brown wore a bright smile, in addition to a coloured waistcoat, a carnation, and at purple tie.

\* \* \* \*

The pharmaceutical world, however, judging from the dresses seen at the Garden Party, is particularly fortunate in the taste of its womenkind. Some of the gowns were quite unique. There were many transparent muslins worn over colours which looked delightfully cool. Mrs. Holmes wore a salmon pink-and-blue figured silk with a white satin collar covered with blue velvet. Mrs. Martindale's costume was a blue silk figured foulard with strips of insertion through which the bright pink silk underneath was faintly seen. Miss Martindale wore a pretty pink dress covered with white spots, edged with black; it was made with the new sleeves reaching to the elbow, and under-sleeves of blue and had a lace yoke crossed with narrow black velvet; she wore a white crinoline hat, with folds of pink, yellow, and green silk and flowers. Mrs. Branson wore a pretty gown of white and green flowered muslin, and a black picture hat with white feathers. Mrs. Carteighe wore a handsome cerise-coloured silk with jet trimmings on the bodice, and lace yoke and sleeves. Mrs. Hills, a figured silk, a chignon boa, and a mauve-and-cream



The Whitehall Room

THE HALL OF GAIETY.

was in place, and at the word of the photographer all hats (the gentlemen's) were removed and sunshades lowered. A few seconds of blinking at the sun, and the plate had received its indelible record of hundreds of faces. The London Stereoscopic Company, 54 Cheapside, E.C., were the official photographers to the Conference; the photograph reproduced on page 151 is one of several of the successful groups taken. The original pictures are 12 x 10, and are supplied in either silver (5s.), or platinotype (7s. 6d.). Some time was afterwards spent in wandering about the gardens, the fern-houses being, however, voted too hot, whilst the students' garden came in for much attention. Among the 800 students' tickets issued yearly a goodly number are used by pharmaceutical students, and many a student of years past was showing his wife this portion of the gardens, where the typical species of the vegetable kingdom are so systematically arranged for purposes of study. The different beds are of relative size according to the number of species the order contains, a glance telling the student whether the order contains many species or no. The railed-in enclosure shown in the photograph of the students' garden on page 150, contains a number of thermometers at various depths in the ground, the deepest being 16 feet below the surface. Observations taken here have enabled the vexed question of the depth to



Another pretty dress was a striped black and-white silk with white yoke, with lines of narrow black velvet; lace fell over the bodice from the bottom of the yoke, and red velvet bows gave it a quaint relief of colour. An attractive gown was a white muslin with three frills round the bottom, edged with pale blue. This had transparent sleeves. The wearer had a bunch of red sweet peas, a chiffon ruff, and a black hat trimmed with blue. Her companion wore a pretty white dress over mauve, and a black hat. An artistic-looking gown was of transparent biscuit-coloured material over pink with tucked pink yoke. Another—at time forbids me lingering longer over ladies' graces, for which a better place could have been chosen to display them to advantage. As one left the gardens one could not help thinking that Dame Nature had arrayed herself in brightest summer garb in order to give the best welcome possible to those of her sons who are spending their lives unfolding some of her greatest treasures.

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A C. & D. man who is not on the editorial staff took Mandalay subscriber along to the Conference on Wednesday afternoon. He reports that shortly after he entered young Mr. Tyrer got up to read a paper on the melting-point. "I know all about that," said this wicked person, and came away leaving my more-seasoned Mandalay friend to take it all in."

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The luncheons on Tuesday and Wednesday midday were held in the King's Hall, Holborn Restaurant, about 350 sitting down each day. On Tuesday the piping-hot soups, jellies, and sweets did not make the Conference members more content with the melting atmospheric conditions; but on Wednesday the caterers tumbled to the fact that it was a little warm, and considerably put ice-pudding on the menu and ice on the table and in the beverages. Mr. Martindale each day took occasion of the luncheon-hour to urge the members to be punctual at the session or at excursions, so that the shortest-remembered person had little excuse for wandering away from the official programme.

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As noted in an earlier part of this paper, the first session of the Conference was held in the Throne Room of the Holborn Restaurant, and it was with regret that this pleasant room was exchanged for the dismal and inconvenient lecture-theatre at Bloomsbury Square. It is a place in which it is difficult to hear, worse to see, and unprovided with means of blocking out the sun's rays, so that all day long in some part of the room inconvenience was caused to sections of the audience. At one time it looked decidedly funny to see a section of the grave Conference members perched on their heads, and, after all, material for covering the glass roof could be obtained cheaply. They had tarpaulin for Mr. Irédès.

\* \* \* \* \*

THE LADIES tell us that they have had a very pleasant time, and they are all charmed with the way in which the Ladies' Committee, headed by Mrs. Martindale, have taken care of them. They were even supplied with fans. They had a good time at Doulton's on Wednesday, after having done Westminster Abbey in the morning.

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TUESDAY EVENING bristled with dinner-parties, small and large. There was little theatre-going.

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THE CONCERT AND DANCE held in the Whitehall Rooms on Wednesday evening eclipsed the Monday affair by centuries. Shortly after 8 o'clock the gathering of beauty and wisdom began. There was a splendid ballad-programme arranged, in which such well-known Metropolitan singers as Miss Lucy Clarke ("In a Chimney Corner," and "Jory O'More"), Miss Louise Dale ("Solveig's Song," by Geig, and "A Fairy's Lullaby"), Mr. Franklin Clive ("I'm a Dreamer," and "Mandalay"), Mr. Whitworth Mitton ("Mary"), and Messrs. Churcher and Schartan (humorous), took part. Fully two hundred guests were present at the commencement of the programme. The applause was frequent and encouraging, and the music was thoroughly appreciated. Later in the evening dancing was indulged in, and, in spite of the heat, evidently enjoyed by the ladies. Pretty dresses, sparkling eyes, and cool and light refreshments did not fail to stimulate the jaded pharmacists after two days' conferencing. The entertainment was a thorough success, and Mr. J. C. Umney and Mr. Harrington were

largely responsible for a thoroughly pleasurable evening. When the ball began many of the gentlemen withdrew to a capital smoker in another room.

And so to bed.

## Reviews.

*Analyse der Harze, Balsame und Gummiharze nebst ihrer Chemie und Pharmacognosie.* By Dr. KARL DIETERICH. Pp. xvi and 283. Berlin, 1900: Julius Springer.

IN this work, appearing practically simultaneously with that of Tschirch, which is noticed below, we have an excellent résumé of all that is known, from the analytical point of view especially, of a subject which has always presented great difficulties to the chemist. Apart from a general description of the resins as a group, we have here an excellent account of the typical processes adopted in their identification and analysis, including detailed accounts of such important processes as fractional saponification, determinations of the carbonyl, methyl, and acetyl numbers, &c. In the special part we have an excellent systematic account of all the important bodies of the group, divided into (1) balsams, (2) resins, (3) gum-resins. This work, which provides us with matter for reference in another column, may be described as being absolutely essential to the chemist who has at any time to deal with this most difficult group of bodies.

*Die Harze und die Harzbehälter.* By A. TSCHIRCH. Pp. viii and 417, with six plates. Leipzig, 1900: Gebrüder Borntraeger.

THIS volume is of somewhat more pretentious character than that just noticed, but this is due chiefly to the larger scope which the author has selected for his subject. He deals far more fully with the pure chemistry of the constituents of the resins, and spends no little pains in giving us an accurate historical summary of them. A special chapter, or section, rather, discusses the matter from a botanical point of view. But neither of the books makes the other less valuable, and chemists interested in the subject could not dispense with either. The historical portion of the subject is very ably dealt with, and the plates, illustrating the botany of certain resinous plants, &c., are very clear and lucid. The chemical section is well illustrated with graphic formulae, and, altogether, we can heartily commend this work to chemists and pharmacists alike.

*Notes on Essential Oils, with Special Reference to their Use, Composition, Chemistry, and Analysis.* By T. H. W. IDRIS, F.C.S. Second Edition. Idris & Co. 7½ x 4½. Pp. xii. + 234. 5s.

ALTHOUGH this book has increased in bulk, and the binding has changed from sedate blue to brilliant red, it remains the most compact of English books on essential oils. We reviewed the first edition favourably, and on that occasion pointed out certain matters which required emendation. We observe that these have been considered, and in most cases altered, while all the individual monographs have been carefully reviewed, and in many cases the latest information has been added, and Mr. E. J. Parry's table of constants and constituents is included. We may recall the fact that the book is divided into two parts, the first of which is on the constituents of essential oils, wherein the chemistry and the subject is gone into somewhat fully, then follows the book proper in the second part, which is devoted to monographs on each of the essential oils used in medicine and for flavouring-purposes. This is the part which commends the book to "everyday chemists" who want to know what an essential oil is, and how they may judge of its quality. This information is given succinctly, and the chemical information is sufficiently complete to satisfy, for example, the most of the requirements of wholesale houses, and retail pharmacists who are wise enough to test the essential oils which they buy. Mr. Idris would make the book still further useful, for example, to brokers and essential-oil merchants, by adding to the "requirement" paragraphs popular or simple tests which a man might perform in his office.

## Westminster Wisdom.

### A SUCCESS.

The Veterinary Surgeons (Amendment) Bill was read a third time in the House of Lords on Friday, July 18, and passed.

### THE COMPANIES BILL.

On Thursday, July 19, the Standing Committee on Trade resumed consideration of the Companies Bill, and made such rapid progress with it that all the amendments were disposed of in one way or other, and the Bill as amended was reported to the House the same evening. It was down for consideration on Monday, but was not reached. On Tuesday it was the first order after questions, and was reached shortly before 4 o'clock.

Colonel Welby, the member for Taunton, moved to strike out the fatal Clause 2.

Mr. Ritchie said he found himself unable to resist the amendment. He made a similar representation to the Standing Committee, but it was not adopted by the committee. His main objection to the clause was that it was not germane to the Bill. He admitted that there were evils that required to be remedied, but to attempt to introduce definitions as to what business might or might not be carried on as a company would be to run counter to all precedent and to cause excessive inconvenience.

Mr. Bryce was of opinion that the matter needed to be dealt with, and he was inclined to think that it ought to be dealt with possibly even more strongly. It was perhaps better, however, to omit this portion of the Bill, as it dealt with a different set of questions from those with which the rest of the measure was concerned.

Mr. Gibson Bowles thought some explanation ought to be given of the way in which these clauses got into the Bill.

Mr. Ritchie replied that they were put into the Bill in the House of Lords; he was not able to explain why. When the Bill came from the House of Lords it was only courteous to that Chamber that it should be introduced in the form in which it arrived.

Mr. Gibson Bowles said that only made the matter more inexplicable, because the Lords sent the Bill to a committee charged with the duty of putting the dots on the "i's."

Sir Walter Foster remarked that the clauses were the result of a great deal of consideration. The right hon. gentleman was yielding, he thought, to the clamour of a class in giving them up. If the clauses were not passed now he felt that an opportunity would have been lost of putting on the Statute-book provisions that were likely to be of great good to the public in protecting them against many forms of illegal practice, both in pharmacy and medicine.

Sir James Haslett said that the second clause proposed that a company should be authorised to assume a title which no individual could assume without passing an examination, the only point in favour of the company being the possession of pounds, shillings, and pence.

Mr. Lawson Walton expressed the opinion that it would be found inconvenient to have these alien clauses in the Bill. Our statutes ought to be so framed that it should be easy to refer to them, and that should not cross one another.

Colonel Long, the member for the Evesham division of Worcestershire, said the objection that the clauses were not germane to the Bill was not in itself a sufficiently strong objection.

Sir J. B. Tuke also spoke, and the motion to strike out the clause was agreed to.

Mr. Maddison moved the omission of Clause 3, and this also was agreed to.

A large number of chemists were in the lobby of the House, also Mr. Jesse Boot. They interviewed members, and the strong effort made by personal interviews and telegraphic messages at the eleventh hour, undoubtedly influenced the course adopted by the House.

Referring to the prospects of the Bill the *Times* remarks:—

It is not to be regretted that certain provisions dealing with the business of chemists and druggists were struck out. There may be, no doubt, a necessity for the regulation of this branch of trade, but it ought to be brought under separate legislation.

The clause omitted has nothing to do with the main purpose of the Bill, and it is not easy to understand why it was ever incorporated with it. The proper objects of the measure, including the restrictions as to the qualification of directors, the underwriting of shares, and the particulars given by prospectus were adhered to, in substance, by the Government, but on several points it was admitted by the law officers that doubts existed and that concessions might be made. The Bill, however, must pass substantially in its present form or must be abandoned altogether.

Similar comments have been made by other metropolitan morning papers.

## Personalities.

MR. T. BLISS, of Messrs. E. Plumer & Co., chemists, Simla and Lahore, is on his way home for three months, returning to India October 13.

MR. C. B. ROBINSON, of Messrs. Thomson & Taylor, Bombay, sailed on July 14 for a three months' holiday in England, returning middle of October.

MR. PERCY PRIOR, who has been associated with Messrs. Lambert & Strong, colonial brokers, Dunster House, Mincing Lane, E.C., for the past ten years, has been admitted a partner in the firm.

MR. ALEC. W. KING, of Messrs. Curtis & Co., and Guthrie & Co., chemists, Mandalay, is now in this country, and called at the C. & D. offices this week. Mr. King is one of the "honest men" that Burns wrote about, and has been thirteen years in the East.

ON Tuesday the Prince of Wales was admitted Honorary Fellow of the Royal College of Surgeons. Sir William MacCormac (President) and other officers of the college attended Marlborough House to present the diploma to the Prince. The diploma was on vellum engraved with the college arms and impressed with the college seal. His Royal Highness is the first Honorary Fellow of the college, and the diploma has been conferred upon him in connection with the approaching celebration of the centenary of the college.

THE REV. T. BIGGIN, a son of Mr. Samuel Biggin, chemist, Al-ager, Cheshire, is in the list of those reported as having been massacred at Pekin. While a scholar at the Manchester Grammar School, Mr. Biggin gained an open mathematical scholarship at Corpus Christi College, Oxford. Subsequently he became a member of Mansfield College, Oxford, and, deciding to devote his life to foreign missionary service, he sailed for China last September. Mr. S. Biggin was formerly in business in Middleton, in the premises now occupied by Mr. J. Brown.

THE career of Mr. John Wishart, who served his apprenticeship to the drug-trade with Mr. W. McMillan and Mr. R. F. Farquhar, chemists, at Inch, Aberdeenshire, provides an object-lesson to students of pharmacy who aspire after higher things. After serving his apprenticeship, Mr. Wishart passed the Preliminary medical examination and entered Aberdeen University. On July 18 he graduated B.Sc., and hopes to complete (he has already passed the third professional) his M.B., Ch.B. degree next March. During his career Mr. Wishart has been awarded the Herbarium medal of the Pharmaceutical Society (1894), one silver medal, one first, one second, and one third prize, six highest honours certificates, and twelve distinction certificates. In his final B.Sc. he passed botany, zoology, physiology, and pharmacology. He was awarded the Duthie scholarship of 70*l.* by the University authorities. He has also published two books, "The Botanist's Vade-Mecum," and "Schedules for Plant-description," which were favourably reviewed in the C. & D. on their publication. Mr. Wishart has also at various times contributed popular science and other articles to various periodicals. He acted as demonstrator in zoology and class-assistant in botany at the Aberdeen University for one year, and as assistant lecturer in botany, physiology, and hygiene at Gordon's College, Aberdeen, for three years, besides lecturing on zoology at the same college for a year. He teaches chemistry in the Aberdeen Academy, and contributed the botanical information for the "British Almanac, 1900."



## French News.

(From our Paris Correspondent.)

**MANUFACTURE OF CAFFEINE.**—By a recent law temporary admission is granted to tea and tea-dust for the manufacture of caffeine. Regulations will be issued later regard to the formalities to be fulfilled in order to secure temporary admission. The law provides that caffeine manufactured from tea imported under the "temporary admission" régime will be allowed to be sold in France only after having been discharged from bond by the payment of duty equal to the duty charged upon caffeine.

**CONGRESS OF CHEMISTRY.**—The General Secretary, M. Auguste Béhal, takes a prominent place amongst French chemists of the present day. He is about forty years of age, and his native place is Lens in the north of France. After going through the ordinary course of classical studies at the colleges of Avesnes and Bethune, he went to Paris for his scientific training. He took his diploma of *Pharmacien de Première Classe* in 1886, and secured his degree as Doctor of Physical Sciences in 1888. The following year he was named Assistant Professor at the Paris School of Pharmacy, which appointment he still holds. In 1890, he was charged by the French Minister of Commerce with a mission in Roumania to study the petroleum wells there, and the quality of the oil. For seven years he was a Professor of Organic Chemistry at the Paris Faculty of Sciences, and on the death of M. Darguin in 1897, he occupied for a time the post of Director of the Central Pharmacy of the Paris Hospitals. In 1898 he was appointed Chief of the Conferences on Organic Chemistry at the Faculty of Sciences. M. Béhal is a member of the Paris Society of Pharmacy, the Society of Therapeutics, &c. He is also on the committee of the coming International Congress of Pharmacy. As regards his scientific work it has been almost entirely in the domain of organic chemistry, which is his speciality.

**MONUMENT TO HAHNEMANN.**—On Saturday morning last, July 21, a monument to Hahnemann, the founder of homoeopathy, was unveiled in the Père Lachaise Cemetery, Paris. A few were present at the ceremony, perhaps thirty persons in all, and the majority were of German nationality; although the monument has been erected by international subscription, it has been organised in such a discreet way that I heard of it merely by chance. We formed up into a small procession at the gates of the cemetery, and proceeded by the *Chemin du Dragon*, in the centre of which the monument is placed. Near at hand are the tombs of Racine, La Fontaine, Molière, as well as the last resting-places of the principal *Maréchals* who fought under Napoleon Bonaparte during the first Empire, for this is an historical spot, and the remains of Hahnemann now lie near those of some of the most cherished sons of France. The monument was covered with a white cloth, and a wreath of natural flowers bearing a German inscription is the principal visible tribute, though the majority of those present were evidently fervent admirers of the initiator of homoeopathy. The speeches usual on such occasions in France were made. The first speaker, who was put out to me as Dr. Brasol, of St. Petersburg (Chairman of the Subscribers Committee), told of the successful efforts to erect the monument where it stands, carried through with much difficulty by a devoted band of the famous doctor's disciples. The money came a little from everywhere, but the great difficulty was to obtain a concession in the Père Lachaise, which is a veritable Pantheon, and to obtain the transfer of Hahnemann's remains from the cemetery in Germany, where they had been interred for fifty years. The principal lines of the homoeopathic doctrine were set forth by a second speaker. He dwelt on Hahnemann's well-known doctrine—*Similia, similibus, curantur*—and of the strong opposition which he met from the leading doctors and pharmacists of Germany, who had their text: *Contraria, contrariis, curantur*. The homoeopath was reviled and persecuted, but he persevered with the faith of an apostle in his case, first at Georgenthal, near Gotha, and afterwards at Bismarck, &c. In 1835 Hahnemann married a French woman. She was a *Mlle. d'Hervilly*, and the romantic element was not wanting. She had gone to Germany to consult him. He cured her, and they married. He returned to

Paris with her, there to expound his new science. The unveiling revealed a handsome bronze bust of Hahnemann, placed on a large rose-coloured block of granite. A list of his works is engraved on the stone.

## International Congress of Pure Chemistry.

(By our own Reporter.)

Continuing our report of last week, two meetings were held at the rooms of the *Société Chimique*, 44 rue de Rennes, on Wednesday and Thursday, July 18 and 19, which were devoted to questions of chemical nomenclature. On Friday, July 20, Signor Guiseppe Oddo, director of the Institute of General Chemistry at Cagliari University, Sardinia, read papers on the etherification of primary alcohols, the action of some inorganic salts on secondary and tertiary alcohols, and a less-important note on the reaction of Kolbe in presence of indifferent solvents. M. Figué read a paper on nitrils.

These meetings were informal little affairs, held in the room of the *Société Chimique*. The *Société* occupies part of the building which is devoted to the *Société d'Encouragement de l'Industrie*, &c., and is exactly opposite the well-known church of St. Germain des Près in the rue de Rennes. It is a simple and plainly-furnished apartment, hung with blackboards and bookcases all round. The proceedings were chatty and informal, and it was not so much a big International Congress with its numerous sections as a lot of foreign *savants* invited by the *Société Chimique*. The

### BANQUET

on Thursday evening, at the *Hôtel Continental*, was one of the features of the Congress. Many whose educational and professional duties, or simply the heat and the attractions of the Exhibition had kept them away from the meetings of the Congress, made a point of attending. M. Berthelot was unable to be present. In his absence M. Engel, Vice-President of the *Société Chimique* (Professor at l'Ecole Centrale), divided the work of chairmanship with M. Armand Gautier, of the Institute. M. Millerand, Minister of Commerce, was expected, but was obliged to delegate his functions to M. Richard. I heard some foreign *savants* express regret that Professor Ramsay had not turned up; nor was Sir Henry Roscoe there.

Over 200 sat down in all. At the chief table I observed, besides those already mentioned, MM. Moissan, Béhal, A. Petit (President of Pharmacy Congress), Deherain, Philippe, Berthelot (son of the great *savant*), Lemoine, Hanriot, Dejean, G. Bertrand, Raoult, Haller, Riban, Jungfleisch (of the School of Pharmacy), Troost, Lauth, &c., among the French *savants*. The foreigners in the places of honour were Lunge, Graebe, Kiliani, Guye, from Switzerland; Professor Ciamician, of the Bologna Faculty of Sciences, from Italy; Professor Kononoff and Mendeléeff, of St. Petersburg; Franchimont and De Schepper, representing Holland; Professor Witt, of Berlin; and Professor Clarke, of the United States; and Dr. Thorpe. At the cross-tables I noted MM. Lindet Lefebvre (President of the Syndical Chamber of Chemical Manufacturers); Etard, of the Pasteur Institute; Professors Cazeneuve, of Lyons; Sabatier, of Toulouse; and Guntz, of Nancy; Le Chatelier, of Paris; M. Paul Vieille, and a few faces well known in the pharmaceutical world; MM. Portes, Patein, W. Douglas Hogg, also Signor Oddo, Professor Paterno, of Rome University; Professor Petterson, of Stockholm; Hofrath Caro, of Mannheim; Professor Pribam, of Bucovina, and Herr von Buchka.

The speeches were not lengthy, and were generally voted excellent.

M. Graebe (Geneva) thanked the Chemical Society and French chemists for their reception. Toasts having been given to the Society and to chemistry, the speaker said:—"Might I be allowed to raise my glass to Berthelot? who is not only at the head of French chemistry, but occupies a place among the *savants* of the day, and will always occupy an exceptional place; in organic, pure, physical, or agricultural chemistry he has made enormous advances," and he drank to the health of their President of honour. (Cheers.) M. Richard expressed M. Millerand's regret at being unable to attend, and assured the meeting of the Minister's interest in chemistry, which added so much to the richness and power of a country. He quoted M. Berthelot to prove that

"the social question was, above all, a chemical question," and that alimentary synthesis would be a feature of the Society of to-morrow. "Allow me," he concluded, "to raise my glass to the most authorised representatives of this dominating science." This was a little haltingly delivered and awkward to translate; the speaker did not seem quite in touch with his audience. Then the banqueters adjourned to the adjoining salons, where coffee and liqueurs were served, and little groups formed all round the room, introductions and pleasant chats being the order of the day.

In the absence of M. Berthelot, President of the Congress, M. Engel read the following little speech prepared by Berthelot:—

"I am happy to receive you at this confraternal banquet; we are all men of the laboratory and friends, filled with the same ardour for work at the fire of our kilns, and we can all meet round this table in sincere friendship. Perhaps we have not all the same appetite, for the younger men have the advantage over their seniors of teeth and less fatigued stomachs. But young and old are animated with the same love for science; they pursue the same career and dream of the same successes. The juniors have a further advantage, for their dreams are before them in all the brilliancy of hope. I associate myself therewith in the most heartfelt way, my dear colleagues, and wish you welcome in the name of the chemists of France and of Paris. Gentlemen, I raise my glass in honour of foreign chemists and of our much-loved science." This discourse was much applauded.

M. Engel then spoke of the excellent scientific relations which unite the chemists of all countries. "This meeting is a proof of it," adding, "I will not say science has no country, for it seems to me that Edison could not be other than an American and Pasteur could not be otherwise than French."

They all seemed very jolly and anxious to know each other. It was nearly midnight when they dropped off one by one.

### Congress of Applied Chemistry.

#### IMPRESSIONS OF A CONGRESSMAN.

A wonderfully fine hall, this amphitheatre of the Paris Sorbonne. At the back of the platform an immense painting by Puvis de Chavannes, around the walls half-a-dozen handsome marble statues—Pascal, Descartes, Lavoisier, &c. On the platform the regulation bust of the Republic and several rows of black-coated and mostly elderly forms behind the long green-covered table. In the spacious auditorium several hundreds of men, in all costumes from evening dress to light summer suits, and perhaps a dozen ladies. On the right of the platform is the band of the 115th Line Regiment. That was what I saw when I entered the hall on Monday. M. Berthelot was absent, still unwell. M. Moissan rose to read his inaugural discourse.



M. MOISSAN.

He is a fine looking man with bushy iron-grey hair and beard. His voice is just a little indistinct (though it would doubtless be audible enough in a small hall). His speech was a long one; he reviewed the progress of chemistry and spoke of the future, of the forces yet at our disposal. Why should we not utilise the heat of the centre of the earth? Then came an allusion to the electric furnace, carbide of calcium, and acetylene. We shall make acetylene by synthesis later on, suggests M. Moissan. At the close of the oration we had the little Jean-Jacque Rousseau para-

graph, without which no French discourse of this kind is

complete. "Hate is born of ignorance and selfishness, and flies at the approach of science. Science is international; it is English as well as Italian, Russian as well as Japanese," and leads up to "universal union and fraternity."

There was a round of applause as M. Moissan laid aside his big sheets of paper and spoke extempore. He proposed to send a telegram of congratulation to M. Berthelot on the success of the gathering, with hopes for the great savant's speedy restoration to health.

A very successful congress it is, says M. Dupont, the next speaker. He is the Secretary of the Committee of Organisation. He reminded us how well the local committees have worked, especially at Bordeaux, Lyons, Nancy, and Rouen, and he complimented the principal members. He gratefully acknowledged the work done by the local committees abroad—in Germany, Austria, Belgium, Denmark, the United States, Russia, England, Spain, Roumania, and Greece. He had already 1,750 adhesions; he hoped to have 2,000. It is one of the biggest congresses yet held, yet absurdly small. He terminated an interesting speech by alluding to the hearty co-operation of governments and scientific societies, and "in the name of the Organising Committee, saluted and welcomed Frenchmen and foreigners alike." Then, while the band played, a gentleman in evening dress handed us a very useful little guide to Paris, with plans, phrases in English and French, &c.

The election of officers then took place, and was a purely formal affair; every one was elected "by acclamation"—i.e., there was no voting, the audience expressing its consent by applause. The office-holders of the Committee of Organisation took the same places on the Congress—M. Berthelot as Hon. President, M. Moissan as President, M. Durin as Vice-President, M. Dupont as Secretary. There were, however, a large number of honorary vice-presidents named. The Frenchmen were MM. Lindet, Carnot, Deherain, Ditté, Haller, Riche, Gallois, and Armand Gautier, and there were a couple of dozen foreigners of all nationalities to whom the same honour was granted. I heard a sigh of relief from behind me, "Thank goodness, that's the lot," as the President terminated the list.

M. Moissan made an announcement regarding an International Permanent Committee, and then remarked that as congresses were always accused of laziness they meant to prove the contrary by starting work that very afternoon at 2 P.M. At 4.30 we were to return to the Sorbonne, for the Minister of Public Instruction was most anxious to receive us and personally do the honours of the building. My neighbour at the back groaned again, and made some remark about the heat and the necessity for liquid refreshment. But he was free now. "La séance est levée," announced M. Moissan, and all streamed out into the cooler air outside.

I noticed but few pharmacists present, but I may name MM. Moureu, Patein, Marty, Pontier, Meillère, and others. Of course a large number of the chemists had stayed over from last week—MM. Armand Gautier, Engel, G. Bertrand, and many of their colleagues. There were a few Americans, some Spanish and Italians, one Japanese, possibly an Englishman or two (but they were by no means prominent). Greeks, Turks, Russians, and Portuguese—but the German and Austrian element predominated, as it always does at these congresses, and the gutturals of the Vaterland filled the entrance-hall.

We dispersed to *déjeuner*—there is no lack of restaurant of all classes just round the Sorbonne, although it is rare that a couple of thousand middle-aged and elderly men invade these sanctuaries of the youthful. It is decidedly cheaper than around the Exhibition.

Like giants refreshed we reunited at the School Pharmacy at 2 P.M.—that is, I speak of Sections I, V, VIII., and X.—the others were at the School of Mines and other establishments. The Sorbonne (which I understood was to have been at our disposal) is occupied by a Congress of History.

Well, we had nothing to complain of. The School Pharmacy had been decorated for the occasion. The St. Andrew's and Stripes and the Red Ensign (why do Frenchmen always use the Red Ensign and not the Union Jack?) flanked a festoon of flags of all nations over the door. A red-velvet *portière*, with handsome gold fringe, was placed at the important entrance.



The two big lecture amphitheatres were allotted to Sections I and X., but Section VIII., having a more direct bearing on pharmacy, was accommodated in the examination hall, *Salles des Actes*, certainly the handsomest of all. M. Riche, the well-known director of the experiments at the Paris Mt., and ex-professor at the Paris School of Pharmacy, suggested we should commence at once, for some members (evening-dress suits, who had doubtless gone to some of the superior restaurants outside the modest "Quartier") arrived very late. We were to begin by electing officers, but he, as at the morning meeting, everybody was very indifferent on the subject. Said M. Riche, "Well, we must elect somebody, and have a bureau. Will you keep your present officers?" A murmur of assent ran round; it was decided, and we had just lunched; and should we find any better as a Chairman than Professor Riche, Vice-President than Burcker, Putein, &c., or a harder-working Secretary than M. Halphen? Very well, M. Riche would consent. Only he would insist on a distinguished foreigner occupying the chair at each meeting. He would offer it to-day to the professor of mineral chemistry at Vienna; to-morrow it should be Ignor Piutti, an old friend from Turin. Everybody was agreeable, but how modest and backward they all were, to be sure. At any rate, M. Riche almost had to employ physical force. He laid his hand on the German *savant's* shoulder, the latter ceded and walked to the presidential chair without a struggle. Encouraged by this, M. Riche went into the highways and byways far from the Chairman's fauvel; he laid his hand on those whom he would, saying "Friend, come up higher." And the chairs at the head of the table were filled. M. Halphen then read his paper on "The Analysis of Fatty Matters." He is a chemist attached to the Ministry of Commerce here; and M. Piutti followed with a paper on "The Locomotive Smoke from a Hygienic Point of View."

We had to finish at 4 P.M., for did not Monsieur le Ministre wait us? Had he not absolutely wished to do the honours of the Sorbonne? We felt it would be wrong to keep him waiting. Besides, there was to be a "toast." Well, one can have a toast without wine, and it was thirsty weather. A lady stroll through the pleasant Luxembourg garden brought us back to the Sorbonne, up the grand staircase, painted with frescoes of the history of French science, into a lofty council-hall crammed to suffocation. We pushed in, conspiring but happy. Were we not to hear Monsieur le Ministre?

As! "Put not your faith in Princes," nor even in Ministers. Just as M. Milleran was unavoidably prevented from being at the Pure Chemistry banquet on Saturday, so we M. Leygues prevented at the last moment from joining us and doing the honours of the Sorbonne. In his absence, M. Moissan hinted, we could still drink to the prosperity of the Congress. There was a champagne buffet next door, and the mighty multitude, moved by a common impulse, made for that door.

\* \* \* \*

Half an hour afterwards a long caravan might have been seen winding its way through the laboratories of the Sorbonne. In each principal laboratory an obliging professor, frock-coated and red-ribboned with the Legion of Honour, showed with much courtesy and in some detail the neatest laboratory arrangements, for the Sorbonne is the neatest of French scientific buildings.

The visit finished about 6 P.M., and we were free to drop into a *café* for the harmless necessary *apéritif*. The rest I will tell you about next week.

BRITISH GUIANA SUBSCRIBER writes (236/30): "I will be subscriber to the *C. & D.* as long as I am alive and can find 10s. to pay the subscription."

THE annual meeting of the Association of the German Chemical Industry will be held at the Patriotic Building, Hamburg on September 21 and 22. Dr. J. F. Holtz is to preside.

VENEZUELAN TARIFF-CHARGES.—It has been decreed by the Venezuelan Customs authorities that borax, boric acid, and extract of campeche, which are not comprised in the tariff, shall be taxed at the rate of 30 centavos (2½d.) per kilo.

## Exeter Association of Chemists and Druggists.

ON July 18, as briefly announced in last week's issue, the members of this Association discussed the Companies Bill.

Mr. T. C. Milton (President), who was in the chair, having explained Clauses 2 and 3, said that so far as he could see the former clause opened the door for companies of any description to enter and call themselves qualified chemists. At any rate, any body of men forming a company could be officially recognised in the future providing he had a qualified manager and put his name over the door. Mr. Stocker thought the Bill would deprive them of what in 1858 they had acquired by Act of Parliament, and Mr. E. Lemmon was of opinion that it was legalising what might or might not be legal. According to judge-made law, companies could keep open shop and be chemists, but he questioned if they had a right to call themselves chemists; he believed that point had not been decided.

Mr. Stocker adversely criticised the action of the promoters of the Bill; and Mr. Reid said that if the Government would add the word "chemist" to Clause 3 chemists would accept it. Regarding Clause 3, Mr. J. Hinton Lake inquired whether it was not a fact that the Council of the Pharmaceutical Society were approached by the Medical Council on that very subject and invited to join them, but that the Council of the Pharmaceutical Society replied that they had a charter of their own and would stand on their own bottom.

Mr. C. R. M. Clapp (Hon. Secretary), commenting on the policy of the Pharmaceutical Society, thought the Society should have adopted a general form of petition, and should have asked each local body or association to adopt that form; then they could have got some Member of Parliament to lay the whole of the petitions before the House, and they might have been represented by counsel, if necessary, when the Bill was in Committee.

Ultimately Mr. J. Hinton Lake proposed the following resolutions:—

(1) That this meeting of the Exeter Association of Chemists and Druggists express most emphatically its dissatisfaction at the introduction of Clause 2 into the Companies Bill, 1900, which practically permits seven unqualified persons to assume and use the titles, and perform the acts personally appertaining to any qualified servant they may corporately employ, thereby inflicting grave injustice upon a large class of individuals who have, after a long course of technical and scientific training and stringent examinations, obtained the statutory qualification for practising pharmacy in Great Britain.

(2) This meeting is of opinion that the said clause, by legalising company trading, though within limits, is in direct antagonism to the spirit of the Pharmacy Act, 1868, which was carefully framed with the object of affording the necessary protection to the public by requiring strict personal supervision in everything appertaining to the business of chemists and druggists.

Mr. Lemmon seconded the resolution, which was carried unanimously.

Mr. Stocker then proposed that

This meeting is strongly of opinion that company trading as chemists and druggists should be prohibited by Parliament, and therefore urge the insertion after the word "surgeon" in line 2 of Clause 3 of the Bill, of the words "pharmaceutical chemist or chemist and druggist."

Mr. Reid seconded the resolution, which was also unanimously carried.

It was further resolved to send copies of the resolutions to the President of the Board of Trade, and to the Members of Parliament for the city of Exeter and the county divisions of Devon, with an expression of the hope that they may see their way to support the resolution, whilst the President, Mr. J. Hinton Lake, and Mr. H. Wippell Gadd (Hon. Secretary) were appointed to form a deputation should it be considered necessary.

Mr. H. Wippell Gadd was appointed a delegate to represent the Association at the British Pharmaceutical Conference and the meeting of the Federation of Chemists Association in London.

# Summer Supplements

TO "THE CHEMIST AND DRUGGIST."

CONTRIBUTED BY BUSINESS FIRMS.

A Concise Summary of What they are about.

**A** GAIN we have the pleasure of calling the attention of *C. & D.* readers to a brilliant collection of specially-printed circulars, price-lists, and pamphlets, which we are distributing with this Summer Number. They exhibit admirably the growth of the artistic feeling amongst advertisers. The engraving and printing of to-day are in marked superiority to what preceded them two decades since, when wood-engraving still barred the way to full appreciation of mechanical processes, and although they may not exhibit the individuality of the engraver, they certainly have enormously developed modern advertising and ephemeral literature. We have a number of excellent examples in this issue. Buyers will appreciate the advantage of having so complete a collection of price-lists, &c., together in such a volume as this, which can be conveniently kept for reference during the next six months. We append concise descriptions of the contents of the insets, and recommend all who recognise the business utility of *THE CHEMIST AND DRUGGIST* to give these and other advertisements in this Summer Number their careful consideration when writing out their orders. During the past few months a larger number of Colonial chemists than usual have been visiting the old country, and several of them with whom we have conversed have told us that they are more pushing in the colonies than chemists are at home. That is largely the reason why their returns are larger, and one of the first elements in the push is selection by the chemists themselves from *C. & D.* advertisements of new goods and new houses to deal with; and when they order they are not afraid of ordering well.

As to the insertion of insets, we may say for the benefit of advertisers, that the next number of *THE CHEMIST AND DRUGGIST* for which they can be received will be the winter issue of January 26, 1901. Full particulars in regard to the conditions and terms on which they are inserted can be obtained from the publisher of *THE CHEMIST AND DRUGGIST*, 42 Cannon Street, London, E.C.

The folios appended to the following notes refer to the pages in the advertisements between which the insets will be found.

**Aerators (Limited)**, Broad Street Avenue, E.C., the originators of "Sparklets," one of the successes of recent years, are sending out some notes on their speciality in the shape of a little handbook, which will be found attached to the two-page inset in this number of *THE CHEMIST AND DRUGGIST*. The book is fully illustrated, and describes in detail the construction of the "Sparklet" bottle and the unique process by which aerated water can be made almost instantaneously. Price-lists of the various bottles, tablets, and fruit and other powders which are also supplied by this firm, will be found in this neat little book. Sketches at the end of the book show the various uses and application of "Sparklets," and there are also reproductions from Mr. Villiers' sketches in the *Illustrated London News* of scenes in the Soudan and in South Africa, where "Sparklets" have been a boon to the fighting men. (Pp. 32-33.)

**The Anglo-American Oil Company**, of London and elsewhere in this country, insert one of the pretty handbills which they are willing to supply dealers with on application. The handbill is illustrative of "White Rose" lamp-oil, and gives most useful hints on how to use lamps, the burners and wicks, and what kind of oil to use. (Pp. 192 and 193.)

**Baiss Brothers & Stevenson**, Jewry Street, E.C., manufacturing chemists, notify the fact that they are contractors to the Admiralty, War Office, the India Office, and to various foreign governments. They give a full list of their special pharmaceutical chemicals and essential oils and ethers, for which the firm will be pleased to furnish special quotations. Sandalwood oil capsules ("Othniel" brand) are a speciality of this house, and they are put up in gold-bronzed metal boxes with leatherette labels, guaranteed to contain pure English sandalwood oil. Santal perles are tiny capsules easily swallowed, containing six minims of the finest English distilled sandalwood oil. These are packed thirty-six perles in white flint glass bottles. The perles show a good margin of profit. Krysyl is a new phenol disinfectant, and it is claimed to possess many advantages over carbolic acid as it is not caustic, and, forming an opalescent milky solution with water, it is economical in use. (Pp. 32-33.)

**Barnett & Co.**, Birmingham and London, insert a beautifully-illustrated twenty-page pamphlet dealing with perfumery. It shows in colours various perfumes, shaving-creams, soaps, powders, and general toilet articles which the firm manufacture at their "Laboratory of Flowers," together with a list of terms and discounts for their proprietary articles as well as other perfumes in bulk. There is also added a list of articles for which Messrs. Barnett & Co. are specially able to compete, being large buyers, importers, and manufacturers for their own consumption. Included with these are representations of the manner in which Messrs. Barnett put up their white-rose cold cream in 2d. tins on cards, also sachet-powders, lip-salves, and hair-wash in floral packets in handsome cases for the counter. Combined with these illustrations are pictures of the factory, the handsome show-rooms, laboratories, and interiors of the different departments of the works and factories at 126 and 128 Bristol Street, Birmingham, with a general view of Grasse, showing the firm's factory and essential-oil distillery. (Inserted loose.)

**The Berkefeld Filter Company (Limited)**, 121 Oxford Street, W., manufacturers of the renowned Berkefeld filters, insert a four-page pink circular illustrating their household filters, kitchen and travellers' pump-filters, "Drip" and stoneware and china "Drip" filters. The circular is well illustrated, and directions for fixing and cleaning filtering cylinders are given. Many reports and testimonials from authorities and institutions are given in the circular, and the Berkefeld Filter Company intimate that they will send a larger and fully-illustrated catalogue on application. (Pp. 64-65.)

**Bratby & Hinchliffe (Limited)**, Sandford Street, Ancoats



Manchester, have a beautifully-illustrated leaflet on toned paper giving the representation by the three-colour block process of the "Orient" complete soda-water machine. Messrs. Bratby & Hinchliffe are the sole makers and patentees of the "Orient" machine, which has a capacity of filling six hundred dozens of bottles per day by hand. The machine may be used with liquefied carbonic acid or adapted to suit ordinary gas-work. It is specially designed for chemists, hospitals, and institutions. It is made for use with liquefied gas, but, when specially ordered, can be made to pump gas and water in the ordinary manner. (Pp. 64-65)

**Brumer, Mond & Co. (Limited)**, Northwich, Cheshire, on a pink-coloured inset again bring their chemicals before the notice of the trade. They make a special feature on the occasion of mineral-water bicarbonate, which is specially made for the production of carbonic-acid gas for aerated waters. The advantages claimed for this product are that the generator yields three times the amount of gas per charge, and keeps much cooler; less than half the acid is required for the same quantity of gas. Perfectly clear liquors are the result, and the waters obtained have a sharp and clear taste—immense advantages. Samples and working instructions are to be obtained from the firm on application. (Pp. 64-65)

**Jam. Burroughs (Limited)**, Cale Street, Chelsea, London, S.W., catch the eye once more with S.V.R. and S.V.M. They supply pure rectified spirit in accordance with the B.I. tests, either duty paid or f.o.b. London for export, all sherry, Malabar and orange quinine wines. They further offer invalid wines and the "Red Cross" brand of whiskys, and a coca-wine which is reported to be "second to none on the market." (Pp. 192-193)

**Thomas Christy & Co.**, Old Swan Lane, Upper Thames Street, E.C., again insert a well illustrated and beautiful printed four-page circular showing "Christia," their well-known substitute for oiled silk, and glasscine balls, a novelty in shop-labels, which are flexible and transparent. Messrs. Christy also advertise their emerald green colours for colouring perfumes and toilet preparations, and illustrate their container for Pictet's ethyl chloride, in which the flow of the liquid can be instantly stopped without replacing the cap. The firm are also agents for the well-known preparations of Messrs. Frerick Stearns & Co., of Detroit, U.S.A. They offer special facilities to chemists for putting up their own preparations in prettily coloured and attractive collapsible tins, and manufacture a first-class tube-filling machine. They are also makers of cachets (Christy) and koseals, for the manufacture of which they also sell a neat and ideal apparatus made in nickel or zinc. Adeps lanæ, either hypus or anhydrous, is also a product of this firm. Messrs. Christy ask us to state that, although their new address, 4, 10, and 12 Old Swan Lane, Upper Thames Street, appears on their inset, in consequence of the premises not being finished they will not be able to move for a few weeks yet. Correspondence, therefore, should still be addressed 25 Lime Street, E.C. (Pp. 160-161.)

**Arthur H. Cox & Co.**, of Brighton, the original makers of Cox's tasteless pills, have a four-page buff, green, and red inset, well printed and well illustrated. A portrait of Mr. Cox, the inventor, is given on it. Cox's tasteless pills can be obtained tinted any colour, in shape round or oval, and either pearl or gelatin coated. On the two inner pages of the inset is a well-set price-list of pills in general as well as the "Little Pill Series." The official formulæ with prices are also added. The back page of the circular is devoted to Cox's packed proprietary pills, which include

Blaud's pills, antibilious pills, gout and rheumatic pills, little liver pills, and a number of others, neatly put up in round, oval, or square bottles ready for retail. (Pp. 160-161.)

**Cuxson, Gerrard & Co.**, manufacturers of "Red Cross" specialities, Oldbury, offer to the trade in their four-page circular, their well-known "Red Cross" brand of disinfectants, including carbolic-powder 15 per cent. in neat tins with dredger-tops, chloride of lime neatly put up in wax-lined packets in wooden cases of six dozen each, carbolic acid in bottles, cleansing-ammonia, glycerin and cucumber, carbolic tooth-powder, "Red Seal" pure benzoin, sulphur-fumigators, and other sanitary necessities. Samples may be obtained on application, and special quotations will be given for contracts. A notification also worth special attention is that orders of 3*l.* value, assorted or otherwise, will be sent carriage paid. (Pp. 160-161.)

**F. Darton & Co.**, 142 St. John's Street, Clerkenwell, E.C., on a four-page crimson leaflet, offer to the trade a special line of cyclists' spectacles. These are fully illustrated, and prices are usefully attached under each representation. The firm also show a good line of binoculars and telescopes, and a luminous compass at a cheap price. Their "Exceptional" hand cameras of the 1900 patterns, for which a special trade discount is given, are also illustrated, together with the "Exceptional" half-plate photographic outfit. Bamboo and triangular aluminium tripods are shown, and the back page is filled with illustrations of clinical thermometers, hydrometers, and thermometers, for which, together with meteorological instruments and special appliances, Messrs. Darton are specially noted. (Pp. 160-161.)

**J. Defries & Sons (Limited)**, 147 Houndsditch, E.C., on their terra-cotta-coloured inset show how the Pasteur (Chamberland) Filter is decorated for restaurant, home, and table use. They also describe the pressure-filter with output of from 25 to 200 gals. daily, cistern-filter, and filter for service-taps. The Pasteur filter deprives water of all germs, and renders it bacteriologically pure without altering its chemical composition. The firm are also sole licensees for the "Equifex" disinfectant-appliances which, we understand, have been adopted by the Metropolitan Asylums Board, and also at the Victoria Hospital, Netley. (Pp. 32-33.)

**The Domett Belts Company**, 456 Strand, London, W.C., have attached to their crimson-coloured inset an illustrated booklet giving particulars of all their patent abdominal and obstetric belts, corsets, elastic-hosiery, and surgical appliances. A large number of hospitals in London and the Provinces are now using the firm's belts and appliances, and a list of these institutions is given on page 2 of the booklet. Prices and instructions for measurement for the various belts are also indicated. As the firm notify that these goods show a profit of 33 per cent. on returns, the advertisement should appeal strongly to the retail trade. A price-list may be obtained on application. (Pp. 64-65.)

**Fletcher, Fletcher & Co. (Limited)**, Holloway, N., who recently started the Vibrona art series, give four examples of British art for British homes which they have so far published. These small pictures are produced by the same method as the larger ones, but in the latter case the prints are in sepia, and resemble very closely the now almost forgotten art of mezzotint, one of the most faithful processes for the reproduction of the tones of painted works. The Vibrona pictures are in each case historical. A description of each one is given in the inset, and the terms on which they are supplied are mentioned. The

pictures bear no advertising matter. "Vibrona" is rapidly becoming a household word in the British Empire, and the pictures serve to perpetuate the word after Vibrona has done its duty. (Pp. 32-33.)

**G. Foster, Clark & Co.,** Eiffel Tower Factory, Maidstone, insert a circular which cleverly appeals to retailers of the Eiffel Tower lemonade in the same that the newspaper advertisements of this article do to thirsty people. Briefly, it is an appeal to the trade to sell the Eiffel Tower article when it is asked for and nothing else, because Messrs. Foster Clark & Co. have by their enterprise popularised this form of making a cooling beverage, and the demand for it is so good that it pays the chemist to show it and push it, especially as there is a profit of 35 per cent. upon it and no cutting. (Pp. 32-33.)

**The Frame Food Company (Limited),** of Battersea, S.W., have attached to their crimson-coloured two-page inset a very dainty little booklet for the counter, containing lullabies and cradle-songs of all nations. The booklet is illustrated with pictures of little ones who have been fed on Frame Food, and naturally contains some excellent testimonials from their mothers and guardians. It is well printed on toned paper, is very artistic, and should prove an attractive counter gift-book. The books can be obtained on application. For some years now this company have had an effective anti-cutting arrangement in successful operation, under which not only the prices of the goods are protected, but the maximum discount is given on purchases of 2/ and upwards to those who sign and adhere to the agreement. By this arrangement the smallest retailer is put on exactly the same terms as his largest competitor. (Pp. 32-33.)

**Frank Fritzsche & Co.,** of Hamburg, the well-known essential-oil manufacturers and makers of synthetical perfumes, insert a very complete price-list of their products. These deserve careful examination by all interested in this important department of the trade with which we are connected. (Pp. 192 and 193.)

**D. & W. Gibbs (Limited),** City Soapworks, E., once more show their appreciation of the public taste in regard to art by the insertion of a sample of a counter-handbill, which they will supply to retail chemists on receipt of a business-card. It is a chromograph picture of a lady who is in her first season, and who has maintained the freshness of her complexion by using the original cold cream specially made by Messrs. Gibbs. The back of the inset contains references to the following special manufactures of this firm:—Cold cream and floral cameo shaving-soaps, the "Baby's Own" nursery-soap, glycerin and cucumber, and other more familiar toilet-soaps. (Pp. 32-33.)

**Robert Gibson & Son (Limited),** of Manchester and London, have a two-page inset. On the obverse side are handsomely-coloured representations of the tins in which they send out their chocolate worm-cakes to the public. These tins are beautifully enamelled, and altogether suitable as fine counter show-tins, the cakes inside being wrapped in tinfoil to preserve them from atmospheric influence. The reverse side of the circular shows one of the firm's 4 lb. glass show-jars in which they send out their A. B. C. cough-pastilles and numerous other pastilles. (Pp. 64-65.)

**Hearon, Squire & Francis (Limited),** 38 and 40 Southwark Street, S.E., wholesale druggists and manufacturing chemists, supply an interesting illustrated record of the progress of this firm since, nearly two centuries ago, it was founded by an apothecary named Kirk. It is one of the most respected wholesale firms in Great Britain, with a enviable reputation in regard to scientific pharmacy

and the supply of genuine drugs. Portraits of the members of the firm, past and present, who have created or maintained this reputation, are given, as well as pictures which give the reader a good idea of the equipment of the warehouses and laboratories in Southwark Street. These by themselves show well the facilities which the firm have for manufacturing galenicals and doing business with dispatch; but the letterpress brings out points of enterprise, showing that this two-century-old business is alive to modern developments. (Inserted loose.)

**Kahnemann & Krause,** of Vienna (sole agent, Mr. L. Brager, 356 City Road, E.C.), on a pretty transparent leaflet offer their Kahnemann cachets and closing-apparatus to the trade. The apparatus is made in nickel only, and can be obtained with or without partition-walls. The Kahnemann tablet-compressor, also nickel-plated, is offered to the retail drug-trade, and the price makes it well within the reach of every retail chemist. (Pp. 64-65.)

**McKesson & Robbins,** manufacturing-chemists, New York, U.S.A., whose London agents are Messrs. S. Maw, Son & Thompson, Aldersgate Street, E.C., repeat their imitation canvas inset, which is devoted chiefly to McK. & R. Ovoid Capsule Pills made from the purest materials and in strict accordance with the B.P. 1898 and other standard authorities. These pills are gelatin-coated by special machinery, so as to avoid the unsightly needle-holes. In the two interior pages of the circular is to be found a full price-list of the pills, which shows a reduction in prices. Messrs. McKesson & Robbins also give a list of their well-known American products and manufactures, and illustrate by a neatly-wrapped bottle the McK. & R. Compound Stearates, which are for use as dusting-powders, for insufflations, or as dry ointments. Since the inset was printed an important advance has taken place in the price of quinine, and we have received a cable from Messrs. McKesson & Robbins stating that all pills containing quinine will be correspondingly increased in price. (Pp. 160-161.)

**Marshall's (Limited),** of 27 Red Lion Square, W.C., manufacturing chemists' and druggists' sundriesmen, send out a compendious illustrated price-list in this issue. The firm have a large show of flexible enamelled collapsible tubes which they put up in pretty art-shapes. Other lines are "Marshall's Reel flycatcher" and fly-papers, moth-droppers, and numerous other preparations. The firm are also agents for Louis Chapuis's French perfumery, and deal in combs, brushes, ribbons, and artificial flowers. Packed drugs, perfumery, and druggists' sundries are dealt with in another department, and they also make a special line of fragrant sachets in pictorial envelopes. The "Butterfly" and "Poppyland" sachets are particularly excellent and pretty side-lines for this season, whilst there is a special novelty in the shape of a "plum-pudding" sachet for Christmas time, and Marshall's button-like flowers, exceedingly natural in appearance, are another attractive side-line which the firm put on the market. (Inserted loose.)

**E. Merck,** manufacturing chemist, Darmstadt, Germany, who in our last special issue inserted a list of his manufactures, repeats it in the present issue. There is on occasion a bird's-eye view of Merck's chemical-works at Darmstadt printed on the last page. These are of great interest to chemists and druggists on account of the fact that they are the present-day representation of what at one time was a small back-shop industry, for Mr. E. Merck the founder, was a humble apotheker who had high ideals in regard to the purity of the chemicals which he had to dispense, and consequently began to manufacture or purify



them for himself, until his friends and neighbours got him to supply them, and so a business was founded. It will be seen from the list that the firm manufacture all kinds of chemicals for the laboratory and for technical purposes, including photography, pyrotechny, and textile industries, besides every known chemical and chemical preparation used in medicine, and such pharmaceutical preparations as ergotine, and physiological remedies such as diphtheria-serum. Extracts from Merck's list are given in the inset, indications being given of how the articles are packed, and although no prices are given, those who apply to the London office, 16 Jewry Street, E.C., or to the New York one, The Merck Building, University Place, New York, or to the Moscow office, Miljutinskij Pereulok, House 15, can obtain all further particulars. Those who buy in retail quantities only will know that the Merck products can be obtained through the ordinary trade channels. (Inserted loose.)

**Nyball & Mason**, of Nottingham, insert a four-page circular in two colours, with twelve representations to the eye of their well-known advertisement, "Good! it's Mason's extract of herbs." If it were not so good the sentence would not bear this startling repetition. A sixpenny bottle of this renowned extract makes eight millions of non-intoxicating herb-beer. We are told by them that their well-known product is "imitated" but certainly "not equalled." (Pp. 64-65.)

**A. & F. Pears (Limited)**, of London, New York, and Melbourne, soapmakers to the Queen and to millions of other subjects, insert a price-list of their soaps, including the popular sixpenny and other makes of the transparent washing and shaving soaps (Pp. 32-33.)

**Pelton & Noel**, Belgravian Steam-works, Brewery Road, N. insert a price-list of the specialities for invalids formerly manufactured by Frederic Mason. These include essences of beef, chicken, &c., various jellies, and concentrated broths, soups, meat-lozenges, and sauces. (Pp. 192 and 193.)

**The Royal Standard Wine Company**, pharmaceutical and general foreign and British wine merchants, of Oxford Mansions, New Oxford Street, W.C., make their bow to the trade in this issue. The proprietor, Mr. E. A. Holloway, M.P.S., is already well known to the trade. The Royal Standard Wine Company have obtained permission to use the Royal Standard in association with their products. Their circular is an illustrated price-list of wine specially suited for chemists who do a wine-business. It includes ports, sherry, claret, Burgundy, hock, and champagne, besides medicinal wines. The company are to make a point of selling Burgundies and clarets bottled at the places named on the labels. Elsewhere in this issue we refer to some of the wine that they are offering to the trade. (Pp. 32-33.)

The firm of **Andreas Saxlehner**, Trafalgar Buildings, Caring Cross, W.C., and Budapest, again present to the trade in this number their handsome four-page inset. On the front page is their already well-known design of bottles of the Hunyadi-Janos aperient water, which the firm claim, on the authority of the *Lancet*, as being the "prototype of all bitter waters." On the back of the inset is a bird's-eye view, in colours, of the Saxlehner establishment near Budapest. (Pp. 32-33.)

**Spilswoode & Co.**, New Street Square, E.C., designers, lithographers, and printers, again invite the attention of manufacturers and shippers to the facilities they command for prompt, accurate, and careful printing, artistic and commercial lithography, photo-lithography, and photo-mechanical printing. This firm are unique in having the

greatest facilities for printing of all sorts and descriptions, and they are the printers of over one hundred trade and general serial journals besides many manufacturers' catalogues, price-lists, and calendars. (Pp. 32-33.)

**Spratt's Patent (Limited)**, the friends of all domestic animals, give us for distribution a most interesting description of a visit to their famous biscuit-works at Bermondsey, which is very fully illustrated. The illustrations comprise sketches of additional buildings recently erected at Poplar, and the Morris Road granary and warehouse. It will be noticed that the company have works at Berlin. Portraits of the men who are identified with this organisation are included, such as Mr. Stephen Wingrove, director of the company, the heads of various departments, and of representatives on the road. The company have considerably added notes which are of special interest to chemists and druggists, and the inset concludes with a photograph of the new head offices of the company at 24 and 25 Fenchurch Street, E.C. (Pp. 32 and 33.)

**The Standard Optical Company**, of Geneva, N.Y., who are manufacturers of spectacles and eyeglasses, insert a circular which will appeal to those chemists who have been sufficiently alive to add this profitable extra to their business. The circular contains photographs of test-cases and testing-rims, besides illustrations of spectacle-frames, and a page showing the structure of the "Anurocone" spectacles, which have temples fitted with a celluloid cone making them readily adjustable to the ears. The company have a London office at 5 Bradford Avenue, Redcross Street, E.C., and an Australian one at 231 Elizabeth Street, Melbourne. Our subscribers should apply to either of these places for further particulars, according to the location of their businesses. (Pp. 160-161.)

**Tomlinson & Hayward**, of Lincoln, contribute an illustrated inset which appeals especially to veterinary chemists and those who have an agricultural connection. Their speciality is Hayward's Yellow "Paste," the improved sulphur sheep-dip, which is easily miscible in cold water. Messrs. Tomlinson and Hayward prevent cutting on this article, and see that their customers get a fair profit. The "Dairy Helps" butter-powder, "Preservative," and butter and cheese colours, as well as rennet and household rennet, are quoted on the second page of the inset. They are safe lines, are put up in attractive packages, and their merits are already well known in this country. (Pp. 64-65.)

**James Townsend & Son**, medical-label printers, of London and Exeter, give patterns and prices of artistic labels for patents, proprietaries, as well as special or general articles in everyday retail sale, on their exceedingly well-printed inset in this issue. The specimens shown in blue ink on enamelled paper are very attractive, but exclusive designs will be prepared if desired. The duplicate syphon check-book is an exceedingly useful line for those who do a mineral-water trade. Pine-tree toilet-paper is another speciality of the firm, who also manufacture bottle-cartons, or folding bottle-cases, from the 2-oz. to 16-oz. sizes, of which they keep artistic designs for many preparations in stock; samples may be obtained on application. (Pp. 32-33.)

**Charles Tyler & England Brothers (Limited)**, photo-mount manufacturers, of 79 Copenhagen Street, King's Cross, N., are the makers of the "Copenhagen" quarter-plate hand camera. They supply professional mounts to dealers at prices enabling them to compete, and they will

also send to members of the trade a new box of free samples of "Amateurs' Mounts" on application. They are the sole agents for Welford's border and cloud negatives and "Easy" vignettes. On the reverse side of the two-page circular, the "Nuera" photo Christmas-cards are offered to the trade. Photo-mounts, hand and stand cameras, negatives and sundries, are the firm's chief specialities, and they are also wholesale agents for all leading American cameras. (Pp. 160-161.)

**William R. Warner & Co.**, of Philadelphia, who claim to have the largest pill-factory in the world—and it is certainly gigantic—insert a very complete price-list of their manufactures. These include effervescent lentiforms, which are compressed tablets of medicinal agents charged with the ingredients to provide a steady sparkle of carbonic-acid gas. Next will be noted soluble hypodermic tablets and figures of the styles in which various lentiforms are put up, including some which do not effervesce. Packed non-proprietary sugar-coated pills of the "Warner" brand are also illustrated, both in respect to the packages ready for retailing and the handsomely-labelled show-jars for counter exhibition. There is a formulary of six pages of sugar-coated pills, with the prices per vase of 1,000. These include many pills suitable for specialising and prescribing. The other illustrations in the inset refer to a number of pharmaceutical preparations which Messrs. Warner & Co. manufacture, and for which Messrs. F. Newbery & Sons, of Charterhouse Square, E.C., are the agents in this country. (Inserted loose.)

**Wright, Layman & Umney (Limited)**, of Southwark Street, S.E., wholesale and export druggists and manufacturing chemists, insert an illustrated description of their premises and business, from which it appears that the business was founded in 1813 by Mr. Curtis, and it became a wholesale concern in the early fifties. Mr. W. Valentine Wright then joined the firm, and Mr. Charles Umney joined it just a quarter of a century ago, four years after Mr. Charles Noel Layman had been taken in as a partner. In recent years much young blood has been infused into the concern, and the business was last year converted into a limited-liability company, with the young partners and the old as directors. As at present constituted the house is one of the most go-ahead in Great Britain, and the description of the drug warehouses, offices, and packing-floors, and manufacturing department given in the inset further shows the extent of their connection. We may add that the amalgamation of Wright's Coal-tar Soap with the drug-business a few years ago has enabled Messrs. Wright, Layman & Umney to greatly develop soap-manufacturing, and they have also organised a very complete perfumery department, the last addition to which has been the packing of toilet-preparations in collapsible tubes. (Pp. 160-161.)

**Young & Smylie**, of Brooklyn, New York, again present their liquorice-preparations to the trade by means of a handsome circular in gold and colours illustrating the tins and packages in which they send out their Acme liquorice-pellets, described as a delicious confection, delicately flavoured, and most refreshing. The "Y. & S." plain or corrugated liquorice in 5lb. boxes in sticks of various sizes, packed in cases also up to 250 lb., is also illustrated. Another product of the firm is the Manhattan pliable liquorice-wafers in boxes of 2½ lbs., and the tar liquorice and tolu wafers in handsome 5 lb. glass-front tins. The agents for Great Britain are Messrs. F. Schutze & Co., of 89 Southwark Street, London, S.E., who will furnish samples and catalogues and submit prices on application. (Pp. 64-65)

## New Companies & Company News.

**JAMES MOLLIN & SON (LIMITED).**—Capital 3,000*l.*, in 1*l.* shares. Objects: To acquire the business carried on at Bradford as "James Mollin & Son," and to carry on the business of dry-salters and dealers in chemicals and materials, &c. Registered office, 4 Bentley Street, Bradford.

**ARDLETT SIZE AND CHEMICAL COMPANY (LIMITED).**—Capital 6,000*l.*, in 1*l.* shares. To acquire the licenses for the U. K. of the Ardletter process for the manufacture of resin, size and other products, and to carry on the business of seed-crushers, oil-refiners, decorticators, &c. The first directors are:—T. Mickels, R. J. Whitney, A. Bigland, and G. Huth. No remuneration until 20 per cent. is paid.

**JOHNSEN & JORGENSEN (LIMITED).**—Capital 50,000*l.*, in 1*l.* shares. Objects: To acquire the business carried on by W. M. Johnsen, J. Jorgenson & I. Thronsdon, as "Johnsen & Jorgenson" and "H. Poths & Co.," and to carry on the business of glass manufacturers and merchants, dealers in druggists' sundries, &c. The first directors are:—W. M. Johnsen, J. Jorgenson & I. Thronsdon. Qualification, 2,000*l.* Remuneration 150*l.* each per annum and 3*l.* per board meeting attended. Registered office 4-6 Bury Street, St. Mary Axe, E.C.

**PROGRESS COMPANY (LIMITED).**—Capital 5,000*l.* in 1*l.* shares. Objects: To acquire the business carried on by A. Jones, as the Progress Supply Company, at the Junction Works, Fazeley Street, Birmingham, and the business carried on at 128 Pershore Road, Birmingham, by Jane Coleman, as Coleman & Co., and to carry on the business of wholesale druggists, drysalters, oilmen, sauce, pickle and mineral water manufacturers, grocers, &c. The first subscribers are:—J. Crisp, Westgate, Dewsbury, manufacturing confectioner; C. E. Orford, White Road, Maney, Sutton Coldfield, provision merchant; Mrs. J. Coleman, The Limes, Maney, Sutton Coldfield; T. H. Coleman, The Limes, Maney, Sutton Coldfield, druggist and drysalter; W. E. Fowkes, Temple Court, Birmingham, C. A.; H. R. Hunt, 151 Alston Street, Birmingham, clerk; and W. T. Biddle, 20 Albert Road, Stechford, clerk. The first directors are:—John Crisp, Thomas H. Coleman and Cornelius E. Orford. Qualification, 100 shares.

**WALTER BURTON (LIMITED).**—Capital 3,000*l.*, in 1*l.* shares. Objects: To acquire the business carried on by W. Burton at Alfreton Road and Denman Street, Nottingham, and elsewhere, and to carry on the business of chemists, druggists, drysalters, oil and colour men, makers of and dealers in electrical, photographic, surgical, and scientific apparatus and materials, &c. The first subscribers are:—W. Burton, 71 Alfreton Road, Nottingham, chemist; Mrs. A. Burton, 71 Alfreton Road Nottingham; J. J. Morris, 20 Fletcher Gate, Nottingham, accountant; W. B. Winnicott, 20 Fletcher Gate, Nottingham, accountant; H. Hebb, Heyworth, Nottinghamshire, clerk; W. H. Bew, 102 Loughborough Road, West Bridgford, Nottinghamshire, clerk; and W. R. Kelly, Trent Boulevard, West Bridgford, Nottinghamshire, clerk. W. Burton is sole governing director for life. Registered office, 20 Fletcher Gate, Nottingham.

**M. CURTIS & Co. (LIMITED).**—Capital 2,000*l.*, in 1,600 5-per-cent preference and 400 ordinary shares. Objects: To acquire and take over the business carried on at 51 High Holborn, W.C., under the style of H. Curtis, and to carry on the trades of wholesale and retail druggists, chemists, drysalters, oil and colour men, importers and manufacturers of and dealers in pharmaceutical, medicinal, chemical, industrial and other preparations and articles, &c., and amongst other things "to borrow or raise or secure the payment of money." The first subscribers are C. Clark, Morwell, farmer; M. Curtis, chemist, and Mrs. M. H. Curtis, both of 51 High Holborn, W.C.; A. W. Clarke, Oldham, hosier; Alfred Manners, chemist's valuer, and F. C. Mawhood Manners, accountant, both of 76 Cannon Street, E.C.; John Harpham, pharmaceutical chemist, 30 Grosvenor Road, Gunnersbury, N. Mr. M. Curtis will be the general manager of the company. Registered Messrs. Judd & Manners, 76 Cannon Street, E.C.

**BOVRIL (LIMITED).**—The directors announce an interim dividend on the preference shares at 5½ per cent. per annum and on the ordinary shares at 7 per cent. per annum.

**PRICE'S PATENT CANDLE COMPANY (LIMITED).**—The directors announce that the accounts for the six months ended June 30, show a profit of about 42,200*l.*, and recommend a dividend of 18*s.* per share.

**ULSTER CHEMISTS (LIMITED).**—The adjourned meeting of this company will be held on July 30, at 3 o'clock in the Hotel Métropole, College Square North, Belfast, when the revelations of the shareholders' committee are promised.



## Novelties.

### SYPHONS AT PARIS.

One of the exhibits which was not quite ready at the time of our visit to Paris in June—that of Messrs. Durafort et Fils 16 and 164 Boulevard Voltaire, Paris—has been in working order for some time now. The exhibit shows the way siphons are filled, and always attracts much attention during the hot weather. During the recent visit of the President of the French Republic to the Exhibition, he lingered long at this stall and listened to the explanation of the various machines by M. Georges Durafort. We are informed that this firm turn out a daily quantity of 20,000 siphons, which ought to go a little way towards making the inferable heat of Paris tolerable.

### CERESINE WAX.

M. FREDK. BOEHM, 16 Jewry Street, E.C., has recently given us an opportunity of examining the various kinds of ceresine wax of Sarg's manufacture for which he is the agent for the United Kingdom. There are twenty kinds of ceresine wax differing in colour and melting-point. In regard to the colour, some of the samples are pearly white, others being coloured to resemble bees' wax, as a substitute for which much of it is sold. Several of these specimens are strikingly like the real thing in colour and odour. The melting-points range from 147° F. to 166° F., thus offering a choice according to the purpose the wax is required for. We have checked the melting-points in several cases and find them substantially correct. There is a growing demand for ceresine wax in many industries in which it has been found to be a perfect substitute for bees' wax, and much more economical owing to its cheaper price.

### PHOTOGRAPHIC MOUNTS.

Messrs. MAXWELL, BAYES & Co., photographic-mount manufacturers, Reliance Works, Gainsborough, have sent us a section of their newer patterns in albums and mounts. Their albums are arranged with loose cut-outs in "art" colours, which are intended to be pasted down on the photograph to complete the album. Each opening of an album has a different coloured mount, so that the photographer is given a choice of colours for matching his photographs against. The mounts are of varying designs, a very pretty pattern being one with a tinted paste-down portion on a paper card, with the word "Souvenir" blocked in gold or colours. There are also some nice dark-enamelled cards with silver edges, which should be very effective for platinum prints. Other mounts are arranged to take three or four prints, and are some of the nicest we have seen. Photographic chemists should obtain a price-list of these goods.

### "PLASMON."

One of the latest examples of the utilisation of waste products is before us in the article called "Plasmon," which represents the proteid elements of cows' milk. It is well known that under the present conditions of the dairy industry there is a much larger demand for milk-fat in the shape of butter than there is for any other part of milk. Cheese is more regarded as a food adjunct than a food element, and consequently the residual milk from creameries has been turned to waste until about a year ago Dr. Siebold, a continental milk authority, succeeded in producing milk solids in a readily assimilable form, to which the name "Plasmon" has been given. It is a white powder, containing nearly 90 per cent of the albuminoid bodies of milk, rendered soluble in water and easily assimilable. Clinical

and other experiments have fully demonstrated the utility of "Plasmon" as an addition to the dietary of invalids and others. It exercises a remarkable influence upon the human economy, and its effects are readily appreciated. It is put up in  $\frac{1}{4}$ ,  $\frac{1}{2}$ , and 1 lb. tins, and also in the form of biscuits and chocolate as a concentrated food for the use of cyclists and others. The latter forms contain 20 per cent. of the "Plasmon," and a single biscuit, weighing about  $\frac{1}{2}$  oz., seems as good as a pocketful so far as the relief of hunger is concerned. The "Plasmon" is put on the market by the Plasmon Syndicate (Limited), 53 Duke Street, Grosvenor Square, W., which is entirely relying upon the medical profession for its introduction to the public, so that chemists and druggists will observe the importance of getting to know all about it. There can be no question that there is a great future before the article, and that its value as a nutrient has been demonstrated.

### TEA FOR CHEMISTS.

It stands to reason that if chemists and druggists are to do business in tea, they must have an article to offer different from what their neighbour the grocer sells. We have pleasure in calling attention to an entirely new tea which is being introduced to the public through chemists. It is called the Chin Bara tea, and the process for its production has been devised by Mr. E. Harcourt Skrine. Chemists may not be aware that the method of manufacturing tea adopted in Ceylon and India is intended to yield dividends to shareholders rather than the finest teas, and the plucked leaf is allowed to go through a fermentation-process before it is dried. Mr. Skrine finds that this is entirely unnecessary for the development of the flavour of the tea. The finest Chinese teas of old were made slowly and carefully. Mr. Skrine finds that fermentation is detrimental, in so far as it produces certain organic acids which disturb the digestion. He has therefore devised a process, and machinery for carrying it out, whereby the plucked leaves are gradually dried and rolled without undergoing fermentation; this he calls the "cold process," to distinguish it from the other. Moreover, he takes very great care in the harvesting of the tea, and from the plucking to the final presentation of the tea every stage of the process is supervised and expedited by a staff of skilled managers. The teas are not blended, but in the three qualities offered by the Chin Bara Chino-Ceylon Pure Tea Depot, 5 Victoria Avenue, Bishopsgate Street, E.C., we have only the difference in the grade of leaf to recognise. The tea neither produces indigestion nor favours nervousness when taken in large quantity, so that it is just the thing for chemists to sell. It is put up in packets ready for selling, and is offered on P.A.T.A. principles for retail by chemists, whom we would recommend to apply to the company for a copy of a pamphlet entitled "A History of Tea."

### NEW PRICE-LISTS.

MESSRS. ROBERT FERBER & Co., wholesale and export druggists and medicinal-capsule manufacturers, 195 Southwark Bridge Road, S.E., have this month issued a neat new price-list extending to twenty pages, devoted to chemicals, drugs, and galenicals, as well as their own special manufactures.

MESSRS. F. NEWBERRY & SON, Charterhouse Square, send us an advance copy of the new edition of their catalogue which will be ready for distribution in a few days, and will be sent to any of our subscribers who drop the firm a postcard. In the forefront is put the section dealing with druggists' sundries, which now extends to 272 pages and is copiously illustrated. Then follows a list of proprietary medicines, dietetic preparations, perfumery, and similar goods, which fills the space up.

to 600. A list of Messrs. Warner's pills and other manufacturers then follows, and to this section is appended useful remarks on medicine-duty and other subjects. The present issue of the catalogue contains a photographic-list, which is inserted loose so that it may be shown to customers.

#### A NEW TRUSS.

MR. VINCENT WOOD, Victoria House, Albion Place, Blackfriars Bridge, S.E., has put forth still another novelty in trusses. One of Mr. Wood's representatives called on us a few days ago to show us the "Elbahsaw" truss. Elbahsaw we may explain, as it puzzled us a bit at first, is simply the word washable spelt backwards, for the truss is a new variety, of the bathing or washable kind. The truss is a zylonite-protected one, so that moisture cannot reach the metallic spring; the pad is of cork, also protected with zylonite. The novelty of the truss, however, is in the cellular cloth cover with which it is provided. The cover is fastened on with a tape round the head of the pad, and can be slipped off in an instant, leaving the truss ready for bathing purposes. Other advantages of a removable cover are also obvious, such as the convenience of being able to wash the cover or replace



it with a new one when worn. The "Elbahsaw" is not more expensive than the ordinary bathing truss, and much more comfortable to wear. The illustrations show the truss with the cover on, and stripped for use as a bathing-truss.

#### "SOLOID" METHYL-VIOLET.

METHYL-VIOLET, much used as a ready stain for diphtheria bacillus, is now obtainable as a "soloid" microscopic stain. The "soloids" are made by Messrs. Burroughs, Wellcome & Co., Snow Hill Buildings, E.C., to contain 0.1 gramme of methyl-violet. We find the "soloid" methyl-violet dissolves easily in water if previously crushed, and yields a colour of great purity. A useful leaflet accompanying the "soloid" stains gives details of the manipulations for staining microscopic preparations, useful as a reminder to pharmacists of the simplicity of the processes involved.

#### SPURWAY'S PERFUMES.

MESSRS. SPURWAY & CO., of Cannes, Grasse, whose London office is 184 Shaftesbury Avenue, E.C., the well-known makers of essential oils, have also manufactured some excellent perfumes, and from a sample that we have received, which is a rich violet, we would commend the perfumes to the attention of our readers. They are of full flavour and strength, permanent, and can be obtained in bulk so nicely bottled that many will be able to sell them to their customers.

#### "ADORA"BLE SHAVING.

MR. M. E. FOSTER, of 50 Bishopsgate Street Within, E.C., whose American bay-rum is well known to his pharmaceutical *confrères*, has put a series of toilet-articles on the market under the name of "Adora." We have had an opportunity of trying the shaving-soap of the series, which is a squat stick enclosed in a black-enamelled case. It makes an excellent shave, the lather being rich and creamy, and soothing to the skin.

#### FOR HOLIDAYS.

A PREPARATION which will be found useful and *à propos*, at this season particularly, for holiday-makers, has been put on

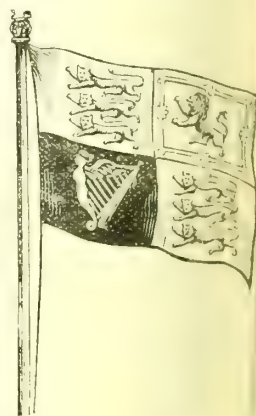
the market by the Antikito Toilet Company, of 200 Regent Street, W. It is called "Antikito Cream," and is said to be not only an absolute preventive of the bites of mosquitoes, gnats, midges, flies, &c., but also to possess skin-soothing and complexion-purifying properties. The sample submitted to us is a milky emulsion possessing agreeably aromatic and soothing properties, and the cream is attractively put up in corked opals enclosed in a carton fastened with a red band. A representative of the company who introduced the cream to our notice, showed us various testimonials (one from a well-known medical man) alluding in terms of praise to the properties of the cream.

#### VASOGEN PREPARATIONS.

THE readiness with which Vasogen may be incorporated with various chemical bodies is responsible for the increasing number of Vasogen preparations. We have recently examined samples of Iodine Vasogen, 6 per cent. and 10 per cent. in strength, and Mercury Vasogen ointment (33½ per cent. and 50 per cent.), which are well-made pharmaceutical preparations. The agreeable aromatic properties these preparations possess make them pleasant to use, the Iodine Vasogen being taken internally as well as applied externally. Besides those already mentioned Vasogen has been successfully combined with camphor-chloroform, creolin, creolin-menthol, creosote, ichthyol, iodoform, naphthol, sulphur, and tar. A nicely-printed pamphlet, compiled by Dr. M. Gallas, of Hamburg, has been issued, which contains numerous notices of the Vasogen preparations and a large number of quotations from text-books and the observations of practitioners on the same subject. The manufacturers are the Vasogen-fabrik Pearson & Co., of Hamburg, their agent in this country being Mr. E. J. Reid, 11 Dunedin House, Basinghall Street, E.C.

#### NEW WINES AND OLD.

MR. E. A. HOLLOWAY, who recently retired from the Holloway Company, which he formed under his own name, has now started in business strictly on his own account as the Royal Standard Wine Company, and the list which he inserts in this issue, and to which reference is made elsewhere, contains a full statement as to the business which he proposes to do. We have had the opportunity of examining a number of the articles which the Royal Standard Wine Company is to put on the market. They are mostly distinguished by the mark included in this paragraph, which Mr. Holloway has obtained permission



to use. He is making a feature of a new wine called "Cokalanis," a combination of coca and kola, put up in splits and reputed pint bottles, which sparkles like champagne. In fact, a fatigued *confrère* who called at our office this morning this week after a busy time in the House of Commons mistook it for the real article when he got a glass of Liebig's meat-and-malt wine, made of Burgundy, and a wine, also made of Burgundy, are features of the business, as well as lime-juice cordial and le mon-squid, which are nicely bottled and handsomely labelled. The company proposes to sell all wine under a guarantee that they will not infringe the Sale of Food and Drugs Act, and Mr. Holloway will give to his customers the benefit of his unique experience in obtaining wine-licences.



## Legal Reports.

### High Court Cases.

#### PITKEATHLEY MINERAL WATER.

Our report of the decision in this case in THE CHEMIST AND DRUGGIST of July 14 it was stated that the pursuers were to pay defenders 300*l*. It is, however, the Reid & Dald Table-water Company (Limited) which is to pay the Pitkeathley Wells and Mineral-water Company that sum.

#### THE VALENTINE APPEAL.

On Monday, in the Court of Appeal, judgment was given in the appeal by the Valentine Meat-juice Company against the decision of Mr. Justice Stirling in favour of the Valentine Extract Company, which had put upon the market Valentine meat-globules, which the plaintiffs alleged had infringed their rights. The plaintiffs had asked the Court to restrain the defendant company and Mr. C. R. Valentine, who had brought the meat-globules on the market, from carrying on the business of manufacturers or vendors of any preparation of extract of meat or meat-juice under any such name or title without clearly distinguishing that business from the business of the plaintiffs. The Court allowed the appeal.

The Master of the Rolls, in giving judgment, said no doubt the case was of some importance. He first expressed the views of different judges of the law applicable to the case. Quoting Lord Herschell, he said:—

"The name of a person, or words forming part of the common stock of language, may become so far associated with the goods of a particular maker that it is capable of proof that the use of this by themselves without explanation or qualification by another manufacturer would deceive a purchaser into the belief that he was getting the goods of A when he was really getting the goods of B. In a case of this description the mere proof by the plaintiff that the defendant was using a name, word, or device which he had adopted to distinguish his goods would not entitle him to any relief. He could only obtain it by proving further that the defendant was using it under such circumstances or in such manner as to put off his goods as the goods of the plaintiff."

In the opinion of his Lordship (the Master of the Rolls) the only difficulty in the case was in the application of these principles to the facts. Argument was used to draw a distinction between a case in which the name, of the use of which the complaint was made, was the name of the person who was carrying on the business and a case in which it was not. In his Lordship's opinion there was no difference in principle. It was, no doubt, more difficult to apply the principle when the name of a person was used. The rule, as applicable to such a case, could not be better expressed than it is by Lord Justice Vaughan Williams:—

"A plaintiff never can complain of the user by the defendant of either the plaintiff's personal name or of any other name that he chooses to use for the purpose of denoting his goods, unless he first establishes that in the market his goods have come to be known by that name. It is not a question, as it has been sometimes suggested, of the right of the law to restrain a man from using his own name. The right and duty of the Court always is to restrain a man from using a name that has come to be recognised as the name of a particular trader's goods for his, the defendant's, goods so as to suggest that the defendant's goods are the plaintiff's goods and to pass them off as such."

Continuing, his Lordship said the question was whether the names "Valentine's Meat Juice," "Valentine's Extract," or "Valentine" alone had come to be used in the market as designating the plaintiffs' preparation only. There could be no doubt that they had. The evidence was overwhelming. The plaintiffs had established that their goods had become known in the market by these names, and there was no reason why these names should not be protected as much as any other name. His Lordship did not wish to judge any man harshly, but he could not treat the defendant's action in the matter as thoroughly straightforward and honest. He came to the conclusion that the defendant C. R. Valentine was perfectly aware that the names "Valentine's Meat-juice" and "Valentine's Extract" were names of great reputation in the market, and that he adopted the name in question for the purpose of getting the benefit of the reputation so far as he could. The evidence showed that a number

of persons had *bona fide* thought that the article put on the market by the defendants was Valentine's meat-juice contained in capsules. The Court had only to consider what would be the effect of the notices put out by the defendants and, in his Lordship's opinion, the only natural conclusion was that which was drawn by those persons who wrote to the defendants asking for an explanation. It was said that the plaintiffs and the defendants were appealing to different markets. His Lordship drew the conclusion that the defendants were representing and intending to represent to the public that their article was a Valentine's extract of meat which had new qualities, and that they were not merely claiming the invention of a capsule. In his Lordship's opinion the term Valentine Extract could not be used in connection with meat-juice without representing the goods to be those of the plaintiffs. The plaintiffs were entitled to the relief which they asked, and, under the circumstances, his Lordship thought that the injunction should extend to the use of the word "Valentine."

Lord Justice Rigby and Lord Justice Collins delivered judgment to the same effect.

Mr. Upjohn asked that the operation of the injunction might be suspended pending an appeal to the House of Lords, but the Court refused to do this.

#### DOLLY BLUE.

JUDGMENT in the appeal of W. Edge & Sons (Limited), Bolton, v. W. Gallon & Sons, Leeds, was given in the House of Lords on July 23. The appellants sought to obtain an injunction to restrain the respondents from selling any laundry-blue not of the appellants' manufacture by the name of "Dolly." Mr. Justice Bruce granted the injunction asked for, but the Court of Appeal reversed. The Lord Chancellor, in giving judgment, said he was unable to come to the conclusion that appellants had established the proposition that the word "Dolly" blue had become so exclusively marked as the article of Edge's manufacture that other people could be restrained from calling it by that name. The impression left upon his mind after considering the evidence was that, although Edge had a larger use of the word, and although Edge's advertisements had produced a larger sale not only of his own but also of Ripley's blue, there had been such a sufficient user of the name as applicable to Ripley's as well as to Edge's blue, that it was fatal to Edge's claim to the use of the word to the exclusion of Ripley, and therefore he moved that the appeal be dismissed with costs. Lords Morris, Davey, Brampton, and Robertson concurred, and the order appealed from was accordingly affirmed, and the appeal dismissed with costs.

#### GOODWIN v. IVORY SOAP COMPANY.

IN the Chancery Division on July 24 this case came on for hearing before Mr. Justice Kekewich. The plaintiffs are Messrs. G. W. Goodwin & Son, Ivy Soapworks, Ordsall Lane, Salford, and the defendants Messrs. A. Lamond and G. C. Lane, trading as the Ivory Soap Company. Defendants are the English agents of an American firm of soap-manufacturers, Messrs. G. Procter & Gamble. Plaintiffs claim an injunction to restrain the defendants from passing off, or assisting to pass off, any soap, not being plaintiffs' Ivy soap, for the plaintiffs' soap; from selling, or offering for sale, or advertising for sale, any soap under the name of Ivory soap which is calculated to lead to the belief that such soap is plaintiffs' Ivy soap; for using the name Ivory as part of their trading, or otherwise associating the name Ivory with any such soap; for the delivery up or the destruction of all soap and appliances for the manufacture of the same, and all things which offend against the foregoing injunction.

Mr. Warmington, Q.C., with Mr. Warrington, Q.C., Mr. Cutler, Q.C., and Mr. Sebastian, appeared for the plaintiffs, while Mr. Moulton, Q.C., Mr. Neville, Q.C., Mr. Lawrence, Q.C., and Mr. Walter appeared for the defendants.

The Court is hearing the evidence as we go to press.

### Pharmacy Act.

At the Airdrie Sheriff Court on July 20, before Sheriff Mair, John Thomson, assistant chemist in Dr. M. Thompson's surgery, was charged with selling a quantity of laudanum to a child of twelve years, he not being a registered chemist and druggist. He pleaded guilty, and the prosecutor





dice as to the Pharmacopœia, but not evidence that it was billing on the trade. He had a letter from Dr. Paul, one of the very men who prepared the Pharmacopœia, but the Court ruled that this could not be put in.

Mr. A. N. Kershaw, having given evidence in support of his counsel's statements, the Mayor announced that the Bench considered there had been a technical breaking of the law, and the defendant would be fined 1s. and the Court costs.

In the second case, Arthur Shiers Dean appeared by his assistant, Wood, who pleaded guilty to selling by mistake.

Similar evidence was tendered, the assistant stating that during his two years' experience at the shop he had never known the B.P. article to be asked for, but always trooper's ointment, or blue ointment, or blue butter.

Mr. Parry called the attention of the Bench to the dangerous principle here involved. So far as the public were concerned, it did not matter whether the principal or assistant supplied the article. The Act was protective, not punitive.

The Bench held that this case was similar to the former one and imposed the same penalty.

In the third case Taylor's Drug Company and their assistant, William Doidge James, were proceeded against in respect to a similar purchase. In the latter case "blue" mercury ointment was asked for, however, and Mr. Parry said as there was an appeal pending from this company in the Skipton case he would withdraw the case. Defendants' solicitor asked for costs, and a guinea was allowed in each case.

#### ALLEGED INFERIORITY IN RESIN.

In the City of London Court on July 24, before Mr. G. Pitt-Lewis, Q.C., Deputy-Judge, Messrs. F. S. Cheesman & Co., 21, Mary Axe, E.C., resin-merchants, sought to recover 67/5s. 1d., for resin supplied to Messrs. Warwick Isaacs & Co. Wraybury, Buckinghamshire. Mr. Rockingham Gill appeared for the plaintiffs, and Mr. Horwood for the defendants. The defendants raised a preliminary objection to the action being tried, and they said that under the contract entered into there was a clause stating that in the event of a dispute arising the whole matter was to be referred to arbitration in London in the usual way. Mr. Gill replied that the plaintiffs had offered to go to arbitration, but the defendants had refused.

The Deputy-Judge said the defendants should have taken out summons under the Arbitration Act as soon as the action was commenced by the plaintiffs to have the contract enforced. In that way the matter could have been referred to arbitration, but it could not be done now.

The case proceeded, and it appeared that in January last the defendants bought eight parcels of American resin of the plaintiffs. There was, in all, about 30 cwt., and it was sold at 5s. 9d. per cwt., being good quality and of "F" grade. When the resin was delivered it was suggested that it is not equal to sample, and the defendants had suggested that they would not be able to use it. The plaintiffs had always been willing, they said, to meet the defendants in any reasonable way, and at considerable trouble they had inspected some of the resin, but could not find anything to object to in it. The defendants had used two of the barrels of resin, and an allowance had been made for one, but as to the remainder there was really nothing to complain of.

Mr. Fox, plaintiffs' manager, was called, and spoke to the facts of the case. In cross-examination he said that in all the defendants for one barrel they had accepted the defendants' word that it was unusable, but it was not true that an arrangement was made by which the defendants were to be absolved from payment of the rest if they turned out similarly bad.

In the defence, evidence was given to show that when some of the resin was boiled it turned out like charcoal. It was quite unfit for use, and was not equal to sample.

The Deputy-Judge said he must find for the plaintiffs for 57/5s. 1d., allowing the defendants 17s.

#### Artificial-violet Patent.

HARMANN & REIMER, of Holzminden-on-the-Weser, Germany, have filed a bill of complaint against G. Lueders & Co., of New York, for alleged infringement of a patent on

an aromatic ketone and process of making same. In the complaint it is described that the discovery is of great value commercially. It is particularly charged that the defendants have lately caused to be imported into New York a large quantity (about 1 kilo.) of artificial violet in infringement of plaintiffs' rights, said product being many times the strength of the ordinary commercial article. The article alleged to be infringed upon is as follows: Aromatic ketone, or ionone, or any substance containing the same, or fragrant ketone corresponding to the formula  $C_{15}H_{20}O$  (artificial violet ketone), whose boiling-point is  $128^{\circ} C.$  at a pressure of 12 millimetres, specific gravity, 0.935, and index of refraction 1.507—said ketone being insoluble in water and easily soluble in alcohol and benzene.

### Bankruptcies and Failures.

*Re H. J. ISON, Shrewsbury, Chemist and Druggist.*

At a meeting of the creditors held at Shrewsbury on July 17, it was decided to accept a composition of 10s. in the pound, subject to the sanction of the County Court Judge.

*Re D. H. McGOWAN, 11 Australian Avenue, E.C., and Demerara, West India Merchant.*

THIS case came before Mr. Registrar Linklater at the London Bankruptcy Court on July 20, in relation to the bankrupt's application for an order of discharge. The failure occurred in August of last year, the liabilities being returned at 45,414/. The assets are in course of realisation. By consent of all parties the hearing of the application was ultimately postponed until September 17.

*Re CHARLES MARK PALMER COCKINGS, trading as a Chemist at 95 High Street, Strood.*

At the first meeting of creditors held under this bankruptcy on July 23, at Rochester, the creditors appointed Mr. Allen, 12 King Edward Road, Rochester, trustee of the debtor's estate. The business will be carried on by the trustee pending a sale thereof. The first examination of the debtor was held the same day, and debtor was examined by the Official Receiver in respect of his affairs. At the time the debtor filed his petition there was an execution levied by the Sheriff at the instance of Messrs. Walker, Troke & Co., wholesale druggists, London. Debtor attributed the reason of his failure to insufficient capital and competition in trade, caused by the very low prices at which the drugs, &c., were sold at the Stores that had opened in the district. He really had about 100l. clear capital to start in business, after he had paid 900l. to the late proprietor of the business, Mr. James Stevens. The financial transactions of debtor with a London moneylender were then gone into. Debtor first borrowed 80l. in 1899, for which he signed a promissory note for 144l. He repaid some 72l., and then obtained a further loan, handing over to the creditor the lease of his shop in High Street, Strood. Debtor then received 50l., and a bill was made out for 200l. for principal and interest. This creditor still holds the lease of debtor's premises as security for his loan. Debtor considered that he was making an average of 40 to 50 per cent. profits on his gross takings, and thought he should be able to "pull through" all right. He admitted that he ordered goods from a traveller of Messrs. Harker, Stag & Morgan's, of London, about three weeks prior to the date of the receiving-order, without disclosing his financial position. He was shortly afterwards pressed by Messrs. Walker, Troke & Co. At the time he ordered these goods he had not the slightest idea of filing his petition or making any arrangements with his creditors. Messrs. Walker, Troke & Co.'s debt was about 30l. odd. He fully expected to be able to pay them. The examination was adjourned until August 13.

### Deed of Arrangement.

**Boden, Edwin**, 44 Trafford Road, Eccles, chemist. Trustee, George H. Russell, Fennel Street, Manchester, chartered accountant. Dated July 14; filed July 20. Liabilities unsecured, 332l. 17s. 6d. Estimated net assets, 130l. The following are scheduled as creditors:—

|                                    | £  | s | d |
|------------------------------------|----|---|---|
| Ashworth, T., Manchester ..        | 12 | 0 | 0 |
| Eggington, T., Manchester ..       | 12 | 0 | 0 |
| Green, C., Greenheys ..            | 33 | 0 | 0 |
| Hockin, Wilson & Co, London ..     | 23 | 0 | 0 |
| Locke, —, Eccles ..                | 29 | 0 | 0 |
| Neild, Isaac & Sons, Manchester .. | 66 | 0 | 0 |
| Taylor, M., Old Trafford ..        | 53 | 0 | 0 |
| Williams, J., Manchester ..        | 20 | 0 | 0 |

## Gazette.

### Partnerships Dissolved.

**Longhurst, J. S., and Longhurst, H. B.,** under the firm S. & B. Longhurst, Old Burlington Street, W., and Farnham, surgeon-dentists.

**Taylor, H. P., and Cave, U. E.,** under the Style of Taylor & Cave, Nottingham, dental surgeons.

### The Bankruptcy Acts, 1883 and 1890.

#### RECEIVING ORDER.

**Temple, John Henry,** Liquidator upon Hull chemist.

#### ADJUDICATION.

**Temple, John Henry,** Hull, trading as a chemist. A petition in bankruptcy has been filed in the case of this debtor who, we are informed, is not trading as Temple Brothers, 11 Witham, Hull, and the proceedings in no way affect the credit of that business.

## Federation of Local Pharmaceutical Associations.

THE annual meeting of the Federation was held at the Hôtel Métropole on July 24, Mr. John Smith, Liverpool, in the chair. The report of the Executive Committee was received and adopted. The report states that the resolution to co-operate in the work of local organisation has been completely justified and that the Federation has been strengthened by the addition of seven associations, six of which the Federation assisted in founding. The chief event of the year has been the Government proposal to amend the Acts of Parliament relating to the selling of poisons, and the Companies Bill. The Federation was instrumental in getting seventy-one resolutions passed and forwarded to the Pharmaceutical Council; 1080 copies of a statement of the case for registered chemists were circulated. The report finishes with a record "That the conflicting opinions regarding the question of company-pharmacies are prejudicial to the interests of pharmacy, and that it is the pressing duty of the Federation to endeavour to harmonise these differences."

The Treasurer's report, which was likewise adopted, shows a slight balance due to the treasurer, which is more than balanced by unpaid contributions from Associations. There were present, besides the Chairman, Messrs. H. Wippell Gadd (Exeter), R. Lord Gifford, and R. Shorrocks (Blackburn), W. L. Currie (Glasgow), Giles (Aberdeen), A. Naysmith and J. Jack (Arbroath), Campkin, jun. (Cambridge), Brunt and Poole (Manchester), Bell (Hull), Hobbs (Tunbridge Wells), Rutherford Hill (Edinburgh), Thompson (Birmingham), and R. H. Swinton (Liverpool).

In moving the adoption of the report the CHAIRMAN said the Federation had perhaps not done a great deal, but they had to consider the smallness of its income. It would be a much more influential body if better supported. Its work was in a degree limited by its income. He hoped that during the ensuing year there would be not only an increase in the number of federated associations but in new chemists' associations. There had not been much initiative offered by outside associations, and he trusted that they would receive greater support during the coming year.

After some desultory conversation and the adoption of the Treasurer's report,

The CHAIRMAN suggested that the meeting should be adjourned in order that they might think over the new phase of affairs in connection with the throwing out of the two objectionable clauses in the Companies Bill. Mr. CURRIE thereupon moved, and Mr. SWINTON seconded, that the meeting be adjourned. This was strenuously but good-humouredly opposed by Mr. GIFFORD, who said he had attended at considerable personal inconvenience, and who moved that the business be proceeded with. The amendment was seconded by Mr. CAMPKIN, jun., but on a vote being taken the amendment was lost, and an agreement was come to whereby the time and place of the next meeting should be announced at the beginning of the Conference proceedings on the next day.



**TO CORRESPONDENTS.**—Please write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. If queries are submitted, each should be written on a separate piece of paper. We do not reply to queries by post, and can only answer on subjects of general interest.

### Critics' Critic Criticised.

SIR,—I have had sent me a copy of the "Digest of Researches and Criticisms" relating to the British Pharmacopœia, 1898, editorially commented upon in your current issue. Will you kindly afford me space for a few remarks upon one aspect of the contents of this "Digest," in so far as criticisms of mine are concerned?

"The Reporter," as the writer of the pamphlet appears to delight in styling himself, has evidently still to learn that the attempt to trample upon the critic is not in itself any effective answer to the criticism. This I write advisedly, and I consider it my duty, moreover, to protest against the trampling process. This process can be well seen on page 85 of the "Digest," under the heading "Phosphorus," where "The Reporter" plants his heel upon the critic and, either by suppressing the criticism altogether or by only quoting fragments of it so that its point is entirely obscured, apparently comes off with the best of the argument.

One example of "The Reporter's" methods may be given at length. I wrote respecting the 1898 B.P.:—

On page 265 we read that potassium permanganate "may be obtained by the interaction of potassium chlorate, potassium hydroxide, and manganese dioxide" . . . Potassium manganate and permanganate . . . obtained by the interaction, at a dull red heat, of the substances mentioned. . . .

"The Reporter" says about this (page 87):—

Dobbin's useful criticism . . . suggests the supplementing of the official definition by words showing the production of permanganate from manganate.

Well, perhaps it does—to anyone who is at his wit's end to find anything rather than a frank admission of a simple chemical blunder, and who is suffering, besides, from a temporary "want of knowledge" of "all the paragraphs on page xiii of the preface to the Pharmacopœia" (*vide* "Digest," page 85)—but it is more likely to suggest to ordinary educated chemists that the chemistry of the 1898 B.P. is not all that might reasonably have been looked for, or that more careful editing should have made it.

Regarding the question of  $\text{KMnO}_4$ , *v.*  $\text{K}_2\text{Mn}_2\text{O}_8$  as the correct formula for potassium permanganate, the spectacle afforded by the Editor of the B.P. in sheltering himself behind the ludicrous arguments of a writer who proclaims himself unaware of the conclusions arrived at by competent recent authorities, is not one which chemists generally will regard as edifying. Can it be so regarded by "The Reporter" himself?

I am obliged to take this "Digest" seriously, seeing that it is issued officially by the General Medical Council; but thinking chemists may well wonder whether that Council will be satisfied with it as a serious contribution towards making the next B.P., when it comes to be issued, a work in which the then state of chemical knowledge shall be adequately reflected.

Yours faithfully,

Edinburgh, July 23.

LEONARD DOBBIN.

### Photographic Slowness.

SIR,—The dilatory conduct of the wholesale photographic trade is fast becoming a by-word. Each successive season finds the plate-makers hopelessly in arrears with their work, and the next will probably be worse. They advertise extensively and then seem to be exhausted with the effort, for they do not make their goods fast enough to meet the demands of their own creation. Camera-makers are the worst offenders. One make I notice advertised in your columns took six weeks to arrive—tears, prayers and entreaties, cash with order, notwithstanding. When delivered on



the tripod legs was split, and it took ten days to effect the necessary exchange. Here is an instance just to hand of the usual style. On July 6 I wrote to a London firm for a 7l. 7s. plate camera of their own make, as advertised by them for a year at least. At the same time I requested a *proforma* invoice and gave good London references. The invoice arrived on July 9 and my cheque was acknowledged with the remark "are expecting cameras hourly when we will immediately despatch." I wrote again on July 17 and to this evening (July 19) have no reply. Meanwhile my customer calls and calls. Fancy any chemist daring to be out of stock of, say—even a half-crown "patent" for three pence!

This annoying style of business extends to the whole range of sundries—lamps, mounts, squeegees. I notice one firm has rubber stamp "To follow," and dab their invoices with it. The fact is sad and suggestive. If we could get the wholesale trade to pay carriage perhaps the "remains" would get less. I say perhaps, because it is difficult to waken them up; the habit is ingrained. The only sharp feature is the terms, "Cash 15th month" or no discount.

Yours very truly,

Glasgow, July 19.

ARTHUR McKELLAR.

P.S.—Since writing the above the firm in question write under date of July 9, as follows:—

We regret to inform you that we shall be unable to deliver the camera and camera for at least three weeks. They have come in, but alteration in the mounting of the lenses is absolutely necessary, and will take above-mentioned time to put to rights. We much regret this renewed delay, and of course place our cheque for the amount of your remittance at your immediate disposal—if necessary.

I placed the letter before my customer, who there and then cancelled his order and left the shop. He will probably be suited elsewhere with some other make, but I have lost my sale.

A. W. K.

In the course of a letter from a London firm of wholesale manufacturers and dealers which we have received this week the following remarks are made:—"Until the retailer discovers that it is necessary for him to hold a fair amount of stock himself and not depend on the wholesaler entirely, there is bound to be a certain amount of delay in the pressure of the summer season, when the manufacturers almost without exception find it impossible to cope with the ever-increasing demand for all classes of photographic goods. The gentlemen who waste their time 'writing to the papers' could probably select 99 lines at random from our list and have them by return, but if the hundredth is for any reason unobtainable they immediately write to their journal a long letter of complaint, without giving the supply-house even a chance of explaining the reason of the omission.

#### Pessimists and Optimists.

SIR,—I would not like to be asked to decide as to whether pessimism or optimism is most desirable or objectionable, but it is certain that in a protracted and uphill fight, such as we are engaged in now, both are alike hampering. At the beginning of the fight the optimist is sure the walls of the enemy's city will fall down at the first blare of the trumpet, and when he finds that this is not so he takes himself off to sleep in a corner; the pessimist, on the other hand, is sure nothing can ever be done, and so he sleeps in his tent, and occasionally wakens up and shoves his head out to jeer and sneer at those who are fighting for him and his interests. It is in the nature of things that the optimist should be most in evidence at the beginning of a long and doubtful war, and the pessimist towards the end. Some two or three years ago I expressed the opinion that the fight on which we were entering would be a protracted one, and the issue would long hang in the balance. Then came the Lord Chancellor's first speech on matters pharmaceutical. More than one gentleman wrote to me at that time asking me if I did not know that I had been over-estimating the enemy's strength. These gentlemen evidently thought that because the Lord Chancellor had delivered a strong speech in favour of chemists, the fight was over. Since then some of these very men appear to me to have practically gone out of action, and I regret this, as their presence on the field was an inspiration to all.

Now it appears to me that the pessimist is in the ascendant.

On all sides we hear the remarks "Nothing will ever come of it all," "Just a few men fighting for notoriety," "Things are getting worse all round," and in some cases it is evident that pessimism is carrying men even further than these innocent remarks would indicate. At all events I received some months ago, an anonymous letter signed "Major" (whoever he was I would advise him to attend to his spelling), in which the Pharmaceutical Society, THE CHEMIST AND DRUGGIST, the *Pharmaceutical Journal* and my unworthy self were all ordered to a place not found in any of our maps. To those who think that men are fighting for mere personal notoriety I would like to say that there are some doing their best, who to my knowledge are on private life so modest and unassuming that nothing but a strong sense of duty would make them take part in any public discussion of any kind. To those who think that "nothing will ever come of it," allow me to point out that much has come of it already. That all over the country the pharmaceutical world is stirred to its very heart, and members are doing their duty manfully, we have proved in the fact that almost every member in the House of Commons has been forced to take an interest in our case, and some prominent men confess that they are sick of it. This has come of the present agitation, and we will be to blame ourselves if we do not make these men so sick that they must vomit justice. That the present government has been forced to face the question (no matter how unjustly) "has come of it." That they would almost as soon face the powers of darkness as face this problem shows that they are at least informed of the rights and wrongs of our case, and this "has come of it." Much more will "come of it" in due time, but pharmacists must remember that this is not a war which can be finished by one valorous bayonet-charge, as it were. Nothing can prevail in this case but firm persistency in the face of all difficulties. Having put our hands to the plough we must not look back.

Of course we have had more or less of muddle and confusion, but I believe these are elements which appear on all well-contested fields. Our leaders have not always been as firm as they might have been; our forces have not been very well directed or kept in hand; we have not worked well with our valuable allies of the Irish brigade; but in spite of all these we are making distinct headway, and what of laurels have been going are with our side so far. However this agitation may end I am quite sure that it will bring about a better state of matters in British pharmacy, and a better recognition of the value of a pharmacist's services at the hands of the people than have had hitherto.

I do not think that Clause 2 of the Companies Act will be allowed to pass, and it is certainly our duty to do all we can to block it. Suppose, however, that it did pass—I would not consider it anything more than a rather important incident in this fight. It would certainly not constitute the deciding blow. It would not even retard fresh pharmaceutical legislation, and it might, by its very absurdity, hasten this. Did the clause pass as it stands abuses would become so glaring that I believe an outraged community would at last clamour for some change. The passing of this clause would, however, practically decide whether the limited-liability principle shall be recognised in pharmacy or not, and for this reason we ought to oppose it. In my opinion we will ultimately have to recognise this principle in some shape or form, but I have always thought we ought to fight for all we can get, in the way of confining the practice of pharmacy to qualified men. We ought to fight for the elimination of the limited-liability principle from pharmacy altogether, if there is any hope of success by this line. I do not think, however, that there is any hope here. This being so, our next best course is to see that the limited-liability principle as applied to pharmacy, be adopted with the utmost possible measure of modification.

Dumfries, July 23.

JAMES REID.

#### More Henbane.

SIR,—I notice in your issue of this date that Mr. Alcock of Birmingham, is prepared to send henbane-plants to anyone who would like them. I can also do the same, but, to prevent overlapping in the distribution, I will send seed as soon as the capsules open. *Hyoscyamus niger* is said to be very rare in the Clydesdale district, and in Henedy's flora only one locality is given. Some five years ago I found a

single weakly specimen near Paisley; this year it has appeared on some waste ground, belonging to a friend, well within the city boundary. It is growing in great profusion; some plants are nearly 4 feet high. This lot was introduced with some rubbish from abroad. The fruits will doubtless ripen, and there will be much seed to distribute.

Yours faithfully,

THOS. S. BARRIE, Ph.C.

West of Scotland College of Pharmacy, Glasgow,  
July 19.

[It should be interesting to compare these foreigners with the strictly native plant.—EDITOR.]

#### Prescribing of Proprietaries.

SIR.—Some months ago a number of West-end chemists published in the medical press a letter on the prescribing of proprietary articles by medical men. The only return they seem to have got for their trouble was to be considered impertinent and interfering. No one in our business can doubt the truth of the statement that the prescribing of proprietaries is detrimental to the interests of both medicine and pharmacy, although there is humour in the fact that some of those who signed that letter spend their money in advertising their own specialities. My reason for referring to the matter so late in the day is the occurrence of the following incident in a provincial town the other day, which shows how medical men suffer from their own acts. A customer, when being supplied with a much-advertised patent medicine, informed the writer that "it had cured her child when all the doctors in the town were unable to do so." A few questions elicited the information that after having two doctors without benefit, a third was consulted. This gentleman, who has the reputation of being the best man in the town, ordered the patent referred to, and nothing else. The moral does not lie deep. The patent did all the good and is for ever henceforth recommended to all friends who are not in perfect health, while the poor doctor's skill and knowledge count for nothing; indeed, he is classed among the failures.

Yours, &c.

COMMON TATUR. (137/72.)

#### Legal Queries.

Before sending in a query for reply in this section see if the subject is not dealt with in "The Chemists' and Druggists' Diary," 1900, pages 212-226, and pages 259-262.

131/38. *Ignoramus*.—An apprentice can only be transferred in the case of a business change with the consent of a parent or guardian.

135/18. *Perplexed*.—It is impossible to answer this query without seeing the agreement, and the facts given are not sufficient. The simple question is "Was the option duly exercised within the time prescribed by the agreement?" The death of the landlord makes no difference to the position. His widow evidently cannot be blamed for not committing herself, when probably she is as much perplexed as our correspondent.

139/17. *J. R. E.*—Your query practically amounts to this: If an unqualified person dispenses a prescription on behalf of a person or company trading as chemists for a customer, may the customer, who has supposed that the prescription would be dispensed by a qualified person, bring an action against the employer or employers for obtaining money by false pretences? We do not suppose that any magistrate would grant a summons for that, even though there was an advertisement to the effect that "all prescriptions are dispensed by qualified chemists." If the customer were able to prove injury or danger by incorrect dispensing, he would have the right of civil action.

139/54. *Hants*.—(1) Delivery to a carrier is equivalent to delivery to yourself. Your claim, therefore, lies on the carrier, in this case the Post Office. You had better not fight the P.O. (2) Your information is not quite correct; but in any case all that the Companies Bill proposes to do is to ensure at least one qualified person in connection with a drug company.

#### Miscellaneous Inquiries.

We endeavour to reply promptly and practically to trade questions of general interest, but cannot guarantee insertion of replies on a particular date, nor can we repeat information given during the past twelve months.

126/63. *Methylated*.—Destroying Ants and Earwigs.—Traps of sweetened beer should be set to catch these insects, and a solution of cyanide of potash or some oil of turpentine poured into their haunts. Much perseverance is needed to get rid of the pests.

124/73. *Ipecac*.—(1) Ext. Cascar. Sag. Fl. s. Sapore.—For Wright's modification of Grozer's process, see *C. & D.* March 11, 1899, page 434. As you are probably aware, this preparation becomes inactive on keeping. (2) Stavesacre and its preparations are not official poisons. (3) Malt-flour is only used in small proportions in infants' food; it cannot be used alone. Your other queries are receiving attention.

132/70. *Splints*.—Shoemakers' Paste is made either with wheat or rye flour, the same as ordinary paste, and about the same proportions. The mixture should be boiled for at least two hours, and sometimes a little alum or caustic soda is added. See the notes on this subject in "Pharmaceutical Formulas," pp. 429, 431.

135/73. *Radix*.—The allowance for board and lodging for assistants is 12s. to 16s. per week, according to the locality.

#### 95/70. Staff.—Paste-b'acking:—

|             |     |     |     |       |
|-------------|-----|-----|-----|-------|
| Ivory-black | ... | ... | ... | 1 lb. |
| Lamp-black  | ... | ... | ... | 1 lb. |
| Treacle     | ... | ... | ... | 1 lb. |
| Sperm oil   | ... | ... | ... | 3iv.  |
| Vinegar     | ... | ... | ... | 3v.   |

Mix and add gradually—

|                |     |     |     |      |
|----------------|-----|-----|-----|------|
| Sulphuric acid | ... | ... | ... | 3iv. |
|----------------|-----|-----|-----|------|

When action ceases, add—

|                  |     |     |     |      |
|------------------|-----|-----|-----|------|
| Sulphate of iron | ... | ... | ... | 3ss. |
| Gum arabic       | ... | ... | ... | 3vj. |
| Hot water        | ... | ... | ... | 3v.  |

Work well in a mortar or mill until the paste is of the proper consistency.

120/72. *Jean*.—Aqueous solution of shellac is decolorised by filtration through animal charcoal, but it is preferable to use bleached shellac to begin with. The varnishing properties of the shellac are not appreciably altered by this treatment.

114/16. *Rupture*.—The Rupture and Varicocoele Cure is, as you surmise, a decoction of oak-bark. Judging from the pamphlets with the "cure," it is a pure quack remedy the claims for the preparation being preposterous.

111/34. *X. Y. Z.*—(1) The herbalists' remedy for dry irritation of the skin is sulphur mixed with a small quantity of powdered liquorice-root. The remedy, no doubt, does good on account of its laxative effect on the bowels. (2) Restoring Faded Writing.—Solution of sulphhydrate of ammonia may intensify the faded writing sufficiently so that it can be read. The method is used at the Bodleian Library, Oxford, the solution being applied by means of a camel hair pencil.

#### 110/11. F. N. M.—Liquid Dentifrice as your sample:

|                 |     |     |     |      |
|-----------------|-----|-----|-----|------|
| Pulv. quillaie  | ... | ... | ... | 3iv. |
| Pulv. persicis  | ... | ... | ... | 3j.  |
| Spt. vini rect. | ... | ... | ... | 3xv. |
| Aqua            | ... | ... | ... | 3xx. |

Macerate for a week, filter, and make up to 3xxx, and dissolve in the tincture—

|                 |     |     |     |       |
|-----------------|-----|-----|-----|-------|
| Acid. carbolic. | ... | ... | ... | 3ij.  |
| Acet. aromat.   | ... | ... | ... | 3ij.  |
| Ol. lavanl      | ... | ... | ... | 3iss. |
| Ol. cinnam.     | ... | ... | ... | 3iss. |

Half a teaspoonful in half a wineglassful of water for dentifrice.

163/33. *Unguentum*.—You do not state what the "ointment" is used for.



4/29. *J. S. A.*—The insects you send which a customer has found in his garden are red spiders (*Tetranychus* *lapidarius*). They are injurious to fruit-crops and hop-plants, but do not injure corn, grass, or root crops.

17/68. *Gentian.*—Powder for Scour in Cattle—This is a mixture of prepared chalk (1), powdered oak-bark (2), and from its general use seems to be a satisfactory remedy.

10/14. *K.*—Boot-sole Finish.—We have analysed a similar preparation to the one you send, several times before. A formula was given in the *C. & D.*, November 5, 1898, page 766.

25/9. *J. S. G.*—Ext. bellad. virid., 1898, is thinner than the product of the 1885 Pharmacopœia on account of the alteration in the directions. Of the two samples you submit the thinner has the proper consistence, whilst the harder sample has the better colour.

16/50. *J. F. E.*—The "stuffy and mousy" smell about a dispensary is best got rid of by ventilation. Sanitas sprinkled about would improve the smell of the place.

18/29. *Aboyer.*—Petroleum spirit of high sp. gr. is obtained by fractional distillation. A washing-process would increase the sp. gr., as some water would remain in the spirit. There is no difficulty in getting the motor-car variety from such firms as Messrs. Carless, Capel & Leonard, Petros Works, Hackney Wick, N.E.

21/52. *Duo.*—(1) **Indian Pills.**—When these pills are used for, a diuretic pill is required. The pil digitalis et scœ of the Edinburgh Pharmacopœia are good, but the formula of St. George's Hospital (as follows) is more suited for retail trade:—

|                        |     |     |       |
|------------------------|-----|-----|-------|
| Powdered digitalis ... | ... | ... | 3j.   |
| Powdered squill ...    | ... | ... | 5j.   |
| Blue pill ...          | ... | ... | 3iij. |

Roll into 3-gr. pills.

One or two pills at bedtime.

(2) **Strong Purgative Pills:**—

|                     |     |     |         |
|---------------------|-----|-----|---------|
| Hyd. subchlor. ...  | ... | ... | gr. xl. |
| Ext. coloc. co. ... | ... | ... | 5j.     |
| Ext. hyoscy. ...    | ... | ... | gr. xx. |

Ft. pil. xx.

One pill for a dose; in obstinate cases two may be taken.

33/63. 1-079. Don't you think your criticism is a trifle "hall," especially considering that the writer was a lady, and she passed?

100/27. *H.V.O.*—Mica is not of much importance in the soil unless it occurs in large pieces, from which sheets can be split. In the preparation of sheets of mica there is a good deal of waste, and this is ground for use as an absorbent material for nitro-glycerin or for decorating wall-paper. As you say, there is a trace of silver in the ore you send; it might be worth your while to have it assayed, if the ore is at all plentiful; it may contain paying quantities of silver.

121/70. *C. H. S.*—The combustion of the phosphorus in making Phosphorus Paste was no doubt due to the dripping being too hot. The quantity of phosphorus in No. 1, "Pharmaceutical Formulas," page 339, should be 1 dr. The rationale in compounding the paste is substantially the same as that adopted for pil. phosphori B.P. You may pour off some water from No. 1.

122/65. *A. W. L.*—**Indiarubber Solution:**—

|                                    |        |
|------------------------------------|--------|
| Masticated caoutchouc (negro-head) | 1 oz.  |
| Coal benzene ...                   | 23 oz. |

Dissolve and concentrate by dissipating part of the solvent.

120/65. *Compounder.*—Tea-stains can be removed from scarlet cloth by eau de Javelle, but it must be used cautiously. Grease-spots on a white belt are best treated with benzin, applied by means of a wad of cloth.

128 13. *J. H. C.*—Powdered ammonium carbonate is the best thing to sprinkle round doorposts to keep dogs away. Another form of the same remedy is to wet bran or chaff with strong liquid ammonia, and use the preparation in the same way as the ammonium carbonate.

128/26. *A. J. C.*—The formula for aq. menth. pip. conc. [in *THE CHEMISTS' AND DRUGGISTS' DIARY*, 1897, page 264, is for a 1-in-40 preparation.

### Information Wanted.

Postcard replies to any of the subjoined inquiries will be esteemed.

133/22. Makers of clinical thermometers marked S in circle.

138 25. Makers of machines for sugar-coating compressed tablets.

124/8. Address of Condy's chemical-works, late of 172 Lavender Road, Battersea.

134 57. What is sold at the Cape under the name "Tricoperas" for treating cuts, scratches, and insect-bites. It is a clear amber-coloured liquid.

## A Summary Extinguisher.

[TOLD BY THE FRENCH ASSISTANT WHO SPEAKS ENGLISH.]



ze leetle Alphonse from ze pharma-  
cien,  
Wis ze siphon of cool eau de seltz  
turns to his famaille so zirsty and  
varm,  
Whom ze sun wis melliflucence melts.  
But ze mauvais Pierre,  
Wis an air de la guerre,  
messenger threatens to belts.

"Gim ne a drink," say ze varlik  
Pierre,  
"I won't," say ze gentle Alphonse;  
Now ze wrath of Pierre is volcanique in  
mode,  
And hees visage go purple-y bronze  
As he springs for hees foe,  
Keen on laying him low;  
While le chien he vinks dix fois ou onze.

So ze gentle Alphonse wis a languid-like  
smile,  
He zinks of hees pire and hees mère:  
And he leefs up ze siphon and turns on  
ze tap,  
And blots out ze face of Pierre;  
And he goes on his way,  
While Pierre he does stay  
And practise ze language of swear.

## The Bandong Quinine-works.

THE third annual report of the Bandong quinine-works states that early in 1899 arrangements were made with the Java cinchona-planters to ensure a regular supply of bark for their factory; for this purpose the cost of manufacture charged to the planters was much reduced. Under the new tariff, which came into operation on March 15, 1899, the manufacturing-charge for bark containing 6 per cent. of quinine was 550fl., as compared with the old rate of 7fl. for 4½-per-cent. bark. The proposal to hold the quinine-sales at Patavia was first mentioned at a meeting held on June 16, 1899. After some negotiations this was carried through, the Government strongly supporting the scheme, and placing with the Bandong works a contract for manufacturing about 250 tons of bark (equal to about 10 tons of quinine) and a further contract for the supply of about 2½ tons of quinine. The co-operation with the planters having so far been secured, endeavours were made to place this co-operation on a permanent basis by mutual guarantees. A step in this direction was the appointment of Mr. P. van Leersum, the director of the Government cinchona-establishments, to superintend the work, and a proposal was made to nominate from the planters two members on the board of the company. Dr. A. R. van Lirge, late director of the quinine-factory, Pandan Arcem, was appointed chemist of the Bandong works on September 1, 1899. On January 1 of the present year that gentleman became manager of the factory, Mr. Smit Sibinga taking charge of the works department. Under these conditions the prospects looked very bright, when, on December 12, 1899, a fire occurred which destroyed the greater part of the works and manufactured product. The direct loss, which was only a little over 3,000fl., was covered by insurance; but much heavier was the indirect loss, caused by the complete stoppage of work for six weeks, and by the long delay before the manufacture could be carried on in as satisfactory a manner as before. This naturally had a considerable effect on the total results of the year. Immediately after the fire, arrangements were made to rebuild the works and to replace the plant destroyed. The new plant was to a large extent constructed at the machine-shops of the Government railways at Bandong, and in fact all the machinery required was obtained in Java.

The supply of pure water had previously been a constant source of trouble; now it is obtained from an artesian well which has been bored close to the works. The question of fuel is still causing anxiety, as wood is very scarce in the immediate neighbourhood of the factory. A request has now been laid before the Government for permission to obtain wood from the Government forests situated at some distance from Bandong. A third difficulty is that of the disposal of the residue after extraction of the quinine from the bark. At present it is simply shot down in the grounds of the factory; but this is objectionable, and endeavours have been made to find other means of disposing of the bark-pulp.

The supply of bark in 1899 fluctuated considerably. On January 1 the bark in stock amounted to about 213 tons, at the end of June it had fallen as low as 30 tons, but on December 31, 1899, the stock had again increased to 303 tons (equal to about 16 tons of quinine). A very large proportion of this bark had been hypothecated, the necessary cash having been supplied partly by Messrs. McNeill & Co. under the existing agreement, and partly by the Bandong factory. The prices of quinine varied very much. Early in 1899 they rose from 15fl. to 24fl. per kilo., then dropped, to show again a considerable advance towards the close of the year.

The bulk of the quinine produced at Pandong was sold in London, but some parcels were purchased by buyers in Amsterdam, New York, Hong-Kong, Straits Settlements, and Melbourne. The sales in Java itself amounted to 540 kilos. (18,900 oz.) to private purchasers, and 1,842 kilos. (64,470 oz.) to the Government. The total quantity of quinine sold outside Java was 17,129 kilos. (599,515 oz.). The stock held by Messrs. McNeill & Co. at the end of the year was 8,327 kilos. (291,445 oz.). The total amount of bark manu-

factured was 701 tons, representing about 30 tons of quinine; in addition to this 666 kilos. of quinine were produced from 853 kilos. of crude quinine from the Bendo works. The net profit for 1899, after allowing for depreciation, amounted to 29,345.86 fl. (about 2,500%), but as the loss on the previous year's working had been 23,342.86 fl., the divisible profit was only 6,000 fl. (500%), out of which a dividend of 3 per cent. will be paid to the shareholders.

## Testing Disinfectants.

DR. F. W. ALEXANDER, Medical Officer of Health for Poplar and Bromley, gives in the *Lancet* the following methods as those used for the analysis of carbolic preparations by the analyst to a large firm of disinfectant manufacturers:

*Method of Testing 35-per-cent. Disinfecting-fluid.*—One hundred c.c. of the fluid to be tested is placed in a small flask and enough dilute  $H_2SO_4$  (one part  $H_2SO_4$  in three) added to neutralise it. About 9 c.c. will be found to be necessary. It is warmed and well shaken, then put into a separator, and then, after standing a few minutes, the lower aqueous portion is drawn off. The increase in volume being noted, it is neutralised with dilute caustic soda (of a sp. gr. of 1.210) and the volume of the resulting pyridine bases read. Subtract this from the increase in volume and the amount of water (first portion) is obtained. The oily upper portion is then run into a Würtz flask fitted into Liebig's condenser and distilled up to 270° C. To prevent bumping, some pieces of marble or limestone are put into the flask before commencing to distil. When all the water is distilled over (which may be noted by the cessation of frothing) the distillation is slackened for a moment to allow of the water being read. This, added to the first portion, gives the total water. The distillation then goes on up to 270° C. and the tar-oils come over with the acids in solution. The total distillate is then placed in a small flask and washed with three washes of dilute caustic soda—(1) of a sp. gr. of 1.125 (30 c.c.), (2) of a sp. gr. of 1.210 (20 c.c.), and (3) of a sp. gr. of 1.210 (20 c.c.). The distillate is warmed and well shaken with each wash, then put into a separator, and after standing a few minutes the lower portion is drawn off each time into a graduated cylinder (stoppered) in which it is neutralised by the careful addition of dilute  $H_2SO_4$ , and in which the tar acids obtained may be read. A further wash of 20 c.c. dilute caustic soda (1.210) may be given to see if all the tar acids are removed, and after this a wash of 15 c.c. of dilute  $H_2SO_4$  is put in the oil, the mixture warmed and shaken, separated into a graduated cylinder, neutralised with soda (1.210), and the resulting pyridine bases added to those formerly obtained give the total percentage of pyridine bases in the fluid.

*Method of Testing Disinfecting-powder.*—Fifty grammes of the powder is weighed into an ordinary retort, and directly distilled into a 100-c.c. graduated measure (or a 50-c.c. measure will do). Care must be taken to apply the heat gradually at first, so as not to crack the retort. First, the water distils off, and secondly, the phenols. The heating is continued as far as possible, and the resulting volume of water and phenols is read in the measure. Before finally discontinuing the distillation it is usual to shake the powder in the retort up well and again heat. Then the percentage of phenols in the powder is to the amount read as 10.5 : 10; 10 : 10.5 :: amount of c.c. of phenols read × 2 : percentage of phenols in powder by weight. This is necessary as the sp. gr. of phenol is about 1.050. This method is not applicable to a powder in which the phenols are combined with the base, or to a powder having as a base peat or any other substance which can be destructively distilled. To find if the distillate be phenols or neutral oils, dissolve in about seven times its own volume of caustic soda (of a sp. gr. of 1.125), when, if phenols, they should dissolve.

THE RULING PASSION.—Wild-eyed Scot: "Gie ma twa penn'orth o' rough-on-rats. A'm owre tired o' life." The Chemist: "We can't make two-penn'orth, sir. We only sell it in sixpenny packets." Scot (contemplating his sixpence): "Then A'l no commet suicide."



## Trade Report.

**NOTICE TO BUYERS.**—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

### 42 Cannon Street, London, E.C.: July 25.

It will be specially noted that this report closes on Wednesday evening, as owing to the extra bulk of the present issue we are compelled to go to press a day earlier than usual. Any alterations which may occur on Thursday will be inserted in our coloured supplement. The leading feature of the week has been a considerable advance in bulk, which was not entirely unexpected. Business, however, in drugs and chemicals is quiet, as usual at this time of the year. The principal changes of the week are as follows:—

| Higher         | Firmer         | Easier      | Lower           |
|----------------|----------------|-------------|-----------------|
| Banuth         | Oil, cod-liver | Bleaching-  | Arsenic         |
| Oicaster       | (in Bergen)    | powder      | Oil, turpentine |
| Quine, seconds | Pepper         | Pot. pruss. |                 |
| Saltpetre      |                |             |                 |
| Valla          |                |             |                 |
| W, Japanese    |                |             |                 |

### Arrivals.

The following drugs, &c., have arrived at the principal ports of the United Kingdom from July 20 to 25 (both inclusive):—Aled oil (Chin.), 25; areca-nuts, 20; benzoin, 1; calumba, 596; camoms, 5; cascara sagrada, 539; castor oil (E.I.), 13; citrone oil, 10; dragon's-blood, 15; drugs, (from Cartagena) 15 cases, (from Montserrat) 4 boxes, (from Callas) 5, (from New York) 179 packages; ergot, 5; essential oils (from Hong Kong and Singapore), 30; fenugreek-seed, 164; galls 50, (Chin.) 100; gentian, 86; guarabic, (from Aden) 35, (from Madras) 110, (from Bombay) 92; honey, (Jam.) 39, (Ital.) 5; kola, (W.I.) 9; lime juice, 67; lime oil, 160pium, 68; peppermint oil, 25; saffron, 1; sarsaparilla, 10; tarinds, (E.I.) 25; vanilla, 15; wax, bees', (E.I.) 19, (Jam.) 23; and Japanese, 200.

### Heavy Chemicals.

*These prices are for market-centres other than London.]*

In the whole, business in the heavy-chemical market keeps fairly satisfactory at all the principal centres, in spite of the fact that there is undoubtedly a rather quieter feeling apparent. Orders for deliveries are coming in well against contracts on both home and export account, but new business is not very heavy. Prices are steady, with little tendency towards decline, in view of the continued higher costs of production.

**SODA-PRODUCE.**—A fairly good all-round demand is maintained in this department, and prices for the most part are firm and unchanged. The continued hot weather is interfering with the production of soda crystals, which are consequently somewhat scarce. Bleaching-powder keeps easier, and owing to more abundant supply rather lower figures are being accepted. Caustic soda is in fair demand, but the supply of this product is also much better now. Prices at present show no alteration either to prompt or forward, but the tendency is easier. Yellow prismatic of potash is a trifle lower.

**RECOVERED SULPHUR** maintains a firm tone, and is rather scarce. Present figures, 4l. 15s. to 5l. per ton, free on rails in bag.

**SODA SALTS** in good request, and firm at late rates. Sugar of lead, white, 24l. 10s. per ton, less 2½ per cent. Glasgow. Sugar of lead, brown, 20l. per ton, less 2½ per cent. Glasgow. Nitrate of lead, 25l. to 25l. 10s. per ton, less 2½ per cent. Glasgow.

**SOUTH DURHAM SALT** in great demand, with price firm at 11l. 3d. per ton, f.o.b. Tees.

**SULPHATE OF AMMONIA** is steady, and again rather higher, with the likelihood of still better figures ruling. Beckton August-

September, 11l. 5s.; Hull, London, and Leith all stand at about 11l. 2s. 6d. to 11l. 5s. Exports from Leith last week, 706 tons.

**TIN CRYSTALS** are in fair request at 9½d. per lb.

**PHOSPHORUS.**—Without change. Wedges, 2s., and sticks 2s. 1d. per lb. Amorphous, 2s. 6d. per lb.

**CALCIUM CHLORIDE.**—Steady, at 60s. per ton.

**WHITE-POWDERED ARSENIC.**—A trifle lower at 19s. 10s. to 20l. per ton, ex ship Gt. Easton.

**MAGNESIUM SALTS.**—In steady request. Sulphate (Epsom salts), 60s. to 62s. 6d. per ton, free on rails in bags. Carbonate of magnesia, 37s. 6d. to 40s. per cwt. Calcined magnesia, 1s. to 1s. 4d. per lb. Chloride of magnesium, 60s. per ton.

**SALTPETRE.**—Steady at late rates. British refined barrels, 21s. per cwt.; and kegs, 22s. per cwt. German barrels, 19s. 6d. per cwt.; and kegs, 20s. 6d. per cwt.

**BROWN ACETATE OF LIME** tends a shade lower, present figures, 6l. 12s. 6d. to 6l. 17s. 6d. per ton.

### English Herb-crop Prospects.

Mr. Alfred W. Bush (Messrs. W. J. Bush & Co., Limited), who has recently visited the English peppermint and lavender districts, writes on July 16 as follows:—

**PEPPERMINT.**—Seldom has the crop looked better at this time of the year. Everywhere the fields of last and the previous year's crops are well covered with strong, vigorous, and rich-coloured plants. Here and there may be seen a barish patch, due to various causes. The young mint is also very fair, although much of it is late. Of course, for a perfect harvest we require plenty of warm sunshine till cutting. These prospects, therefore, combined with the fact that there is a fair stock of old oil still in first hands, incline us to the belief that we shall see very considerably lower prices.

**LAVENDER.**—Not only have we no hesitation in saying that the plants are looking remarkably well, but we think it is not exaggeration to say that they have never looked better. The flower-spikes are prolific and well advanced, and many are already showing a tinge of blue at the base. The fields will soon be glorious to the eye and nostril. Lavender-flowers are again coming into popularity with the public, and a large portion is bunched for the market, otherwise if all were distilled for oil there would be a glut in this commodity. At the time of writing the weather is just the kind that is required.

### Bulgarian Rose-crop.

Our correspondent in Bulgaria, under date of July 14, writes that the new rose-crop is, without doubt, one of the very best they have ever had, both in quality and in quantity. The rose-distillation, which lasted on an average about twenty-six days, was effected under most favourable conditions, and in consequence the new otto is perfect in its aroma. On account of the largeness of the crop, no producer, even in villages of ill-repute, has dared to adulterate the produce during the harvest. During the last fortnight all the exporting-houses have been busy visiting the rose localities, and they all praise the excellence and purity of this year's otto. Though they have not yet completed their investigations, they all agree that this year's crop has yielded over 100,000 oz. (Turkish) of otto of the richest quality. All these indications point to lower prices. These will hardly be fixed here before the middle of August.

### London Markets.

**ACID, CARBOLIC.**—Firm at 11d. to 11½d. per lb. for 39° to 40° C. Ice crystals, July–August delivery, and 10½d. to 10¾d. for 34° to 35° C.: 50 per cent. crude is 2s. 1d. to 2s. 3d., and 60 per cent. 2s. 7d. per gallon.

**ACID, CITRIC.**—Very quiet, and unchanged at last week's quotations.

**ALOES.**—About 50 cases of new crop Curaçao have arrived and will probably be offered next week.

**ARSENIC.**—Best English powder is quoted 20s. 6d. to 20s. 9d. per cwt. spot.

**BENZOIN.**—Quiet. Gum at about 6l. 10s. to 7l. is mostly inquired for, but it is not to be had. There have been no arrivals of Sumatra, but 23 cases of Siam have just landed per *Adour*.

**CASCARA SAGRADA** is quoted 22s. 6d. to 25s. per cwt. spot for new bark. Several hundred bags have arrived this week from the Pacific Coast.

**CHAMOMILES.**—During the last few days a good business has been done to arrive in Belgian No. 1 flowers of new crop at private prices, said to be considerably lower than what some agents are now asking—viz., 92s. 6d. to 95s. The crop, which is not likely to be large, is now about due.

**BISMUTH SALTS.**—The long-expected advance in bismuth took place this week, when the combination advanced the metal 2s. 6d., and the salts 2s. per lb. The prices are now as follows:—

|                    | List-price<br>and under<br>56 lbs.<br>s. d. | For assorted<br>lots of not<br>less than<br>56 lbs.<br>s. d. |
|--------------------|---------------------------------------------|--------------------------------------------------------------|
| Subcarbonate ...   | 7 11                                        | 7 10                                                         |
| Subnitrate ...     | 7 2                                         | 7 1                                                          |
| Oxide ...          | 10 0                                        | 9 11                                                         |
| Citrate ...        | 7 0                                         | 6 11                                                         |
| Salicylate ...     | 7 6                                         | 7 5                                                          |
| Nitrate cryst. ... | 4 4                                         | 4 3                                                          |
| Subchlor. ...      | 7 7                                         | 7 6                                                          |
| Tannate ...        | 5 0                                         | 4 11                                                         |

Liquor bismuthi et ammon. citr. has been advanced to 8½d.

**COCOA-BUTTER.**—The auctions to be held at Amsterdam on August 7 will consist of 45 tons Van Houten's, 10 tons Helm, 4 tons De Jong, and 5 tons Mignon.

**CREAM OF TARTAR.**—Quiet, and the tendency is, if anything, easier. Best white crystals on the spot are quoted 77s., powder 79s., and 95 per cent. 78s. per cwt.

**DRAGON'S-BLOOD.**—Quiet. About 13 cases have arrived this week, 3 consisting of fine reboiled lump and 10 of medium seedy ditto.

**ERGOT.**—Quiet. New Spanish to arrive is quoted 2s. 8d. per lb., c.i.f.

**GALLS.**—Firmly held, at 115s. per cwt. for Persian blue, and 95s. for green. There are no white on the spot; for arrival some might be had at 75s. per cwt. Chinese on the spot are held for 80s.

**GUM ARABIC.**—So-called insoluble Persian sorts have been in more inquiry, especially the lower grades. Good pale is worth 22s. to 26s. per cwt., and good to fine sorts 19s. 6d. to 20s.

**GUM TRAGACANTH.**—There has been a good demand this week at steady prices, owing to fresh supplies of Persian. The 10l. to 12l. grades of Bagdad and Persian are now scarce and wanted. Quotations are:—Firsts, 14l. 5s. to 14l. 10s. per cwt.; seconds, 12l. 10s. to 13l. 10s.; thirds, 11l. to 12l.; and fourths, 8l. 10s. to 10l. 10s.

**IPECACUANHA.**—Both Rio and Cartagena are very quiet, and prices are unchanged, at from 12s. to 12s. 4d. per lb. for Rio, according to holder and quality, and at 8s. for Cartagena. About 18 bales of the latter description have arrived this week.

**MENTHOL** is unchanged but firm, business having been done at from 9s. 3d. to 9. 6d. per lb. spot for Kobayashi brand. To arrive, however, the tendency is lower, there being offers of 8s. 6d., c.i.f.

**OIL, ANISE, STAR.**—Quiet. The spot quotation is 6s. 10½d. per lb. and 6s. 9½d., c.i.f., to arrive.

**OIL, CASTOR.**—All grades are advancing owing to the scarcity of seed. Belgian of first pressing is now 33s. 6d. per cwt. spot, and to arrive (August–December delivery) 31s. 6d., f.o.b., Antwerp; second pressing, spot, 31s. 6d. Hull make is 35s. 6d. in barrels and 4½d. per lb. in cases for medicinal. First pressing is 33s., and seconds 31s. 6d. in barrels; firsts, 31½d. in cases, and seconds, 31½d. ex wharf London.

Advices from Calcutta, dated July 5, stated that crushers have lowered their asking prices, and at the reduction some sales have been made for near delivery equal about 3,000 cases. The market closes steady and quiet, the high prices having checked the demand.

**OIL, COD-LIVER.**—Our Bergen correspondent writes, under date of July 21, that the cod-liver oil market is now growing firmer every day. Sellers have for sometime been of the opinion that prices have gone too low entirely, and are therefore holding all goods back from the market, or rather, at so high prices that buyers hesitate in granting their demands. No Lofoten non-congealing oil can to-day be bought below 72s. per barrel, f.o.b. Bergen. The exports to date amount to 4,600 barrels, against 7,282 barrels at the same time of last year.

**OIL, LEMON,** is unchanged at 3s. 5d. to 3s. 6d. per lb., c.i.f.

**OIL, TURPENTINE.**—The market has dropped daily until on Wednesday the quotation for American on the spot was 31s. 3d. per cwt.

**OPIMUM.**—The inquiry remains good at unchanged rates, though stock is now getting into small compass. Good druggists' is worth 10s. 3d. per lb. Soft-shipping (Tokat) seconds, 10s.; but nothing fine is to be had. In Persian there have been sales for arrival at 13s., at which figure there are still buyers.

**SMYRNA, July 13.**—The sales for the week amount to 281 cases, as follows:—130 cases old Kurduassar tale quales at the equivalent of 8s. 9d. to 9s., c.i.f.; 90 cases new Yerli, at 8s. 2d. to 8s. 5d.; 29 cases new ditto, 8s. 4d.; and 35 new current talequale at 8s. 1d., c.i.f. all for exportation. The daily heavy arrivals from the interior fully confirm the idea of a large crop; so far 930 cases have arrived, against 500 at the same time of last year. Native buyers have abstained from speculation so far, the principal buying being for account of China, but both European and American consumers have also come in for a share. The stock of old is now quite exhausted, except what few lots still remain in the hands of interested holders, who add 1d. or 2d. per lb. on last prices every time a buyer comes forward. New opium has also advanced but not to such an extent as the old.

**OTTO OF ROSE.**—Mr. H. A. Holstein, of Kezanlik, estimates this year's crop of otto at about 800,000 meticals, equal to 120,000 T. oz., against 69,000 T. oz. in 1899; 43,000 T. oz. in 1898; 70,000 T. oz. in 1897; and 110,000 T. oz. in 1895. No price for the new crop has yet been fixed, but it is expected that quotations will be lower than they have been for many years past.

**QUININE.**—Since our last there has been a good daily demand in the speculative market at advancing prices. On Wednesday from 1s. 5½d. to 1s. 5¾d. per oz. was paid for spot, 1s. 6d. to 1s. 6½d. for October, and 1s. 6¾d. to 1s. 6¾d. for December delivery.

**RHUBARB.**—Quiet, after the activity of last week. A few cases of medium to bold, round, rough, high-dried, common have sold at about 6d. to 6½d. per lb. There have been no arrivals this week.

**SALTPETRE.**—British refined has been advanced 5s. per ton, spot being now quoted at 19s. 9d.

**SANTONIN** is still very scarce, although on the Hamburg market 10s. 6d. per lb. is quoted in second hands, which is slightly under the maker's price.

**SEEDS.**—Retail sales of Russian *Anise* are being made at 20s. per cwt. *Coriander* is quiet at 10s. per cwt. for Morocco. Russian is offering at 10s. 6d. *Cumin* is steady, although the new crop of Morocco seed is coming in freely. A sale has been made at 28s. per cwt., but orders are reported to be few. Fine Malta has sold at 34s. per cwt. *Canary* is quiet, a large quantity of Turkish having changed hands early in the month at 28s. to 29s. per quarter, so that the dealers are for the present well supplied; 29s. 6d. to 30s. is now the quotation. *Caraways* are firm at 32s. to 33s. per cwt. for good Dutch. New crop Morocco *Linseed* has arrived, but no sale has been reported; 65s. per quarter is wanted.

**SENNA.**—About 200 bales Tinnevely of the new crop will be offered in auction next week. There have been inquiries principally for the lower grades.

**SHELLAC.**—At auction on Tuesday the small supply of 448 cases was offered, of which about 200 sold at steady prices for second orange and fully previous rates for button. Good bright curly second orange realised 65s. to 66s. per cwt.; livery reddish, part cakey, 59s. to 60s.; ordinary to fair button firsts, 58s. to 63s.; and fair blocky, 57s. Privately the market is very quiet, the quotation for second orange TN on the spot being 60s. to 61s.

**SPICES** have been quiet this week. *Pepper* is getting gradually dearer owing to short supplies and the autumn demand being in view. Singapore black is now worth 6½d. per lb. on the spot, and 6¾d. has been paid for September–November steamer. White pepper also continues firm. Recent quotations. Zanzibar *Cloves* are rather easier at 2½d. per lb. for August–October and January–March delivery. Cochin *Ginger* is steady, and Japan is selling privately 24s. 6d. per cwt.

**TARAXACUM-ROOT.**—Good quality on the Hamburg market is quoted at 30s. per cwt. c.i.f., for spring dug.



**BERMERIC.**—In auction about 300 bags of various descriptions were bought in. Privately the market is quiet, Cochinchina bulbs selling in small lots at 8s. per cwt. Good to fine bright Madras finger is quoted 32s. to 34s., and Bengal at 3s.

**ANILLA.**—There was a good demand in auction on Wednesday, and everything offered was sold at "full up" prices to 1s. per lb. advance. The following rates were paid:—Seychelles, Mauritius, &c., 6 to 8½ inches, 20s. to 24s. 6d. per lb.; 3½ to 7 inches, 15s. to 19s. 6d.; fair to good, short and various, 11s. 6d. to 14s.; inferior and dry, 4 to 8 inches, 9s. to 12s. per lb.

**JAX, JAPANESE.**—Higher prices are asked from Japan this week owing to reported damage by floods. 31s. 3d. to 31s. 6d. per cwt., c.i.f., is now quoted, according to importer; on the spot business has been done at 32s. 6d.

### Baghdad Business.

A short report on the trade of Baghdad during 1899, by Major Melville, Acting British Consul, gives the following in the list of exports:—

|                                        | 1899   | 1898   |
|----------------------------------------|--------|--------|
| Liquorice-root, bales ...              | 3,479  | 4,630  |
| Galls, bags ...                        | 10,748 | 10,426 |
| Sesame-seed, bags ...                  | —      | 6,819  |
| Drugs ...                              | £750   | £700   |
| Gum-arabic, cases ...                  | —      | 182    |
| Gum, " ...                             | 48     | 20     |
| Gum-ammoniacum and galbanum, cases ... | —      | 123    |
| Gum, " pkgs. ...                       | 7,215  | 6,800  |

### Acetylene Importation Prohibition.

A General Order from the Custom House, London, dated June 22, 1900, has been issued for the information and guidance of the officers concerned with reference to the importation of acetylene into this country. The Order states that acetylene in admixture with air or oxygen, being declared to be an explosive, shall be prohibited from being manufactured, imported, kept, conveyed or sold. This, however, does not apply to acetylene in admixture with air when such admixture takes place only in a burner or contrivance in which the mixture is intended to be burnt, or to an admixture of acetylene and air which may unavoidably occur in the first use or recharging of an apparatus, properly designed and constructed with a view to the production of pure acetylene.

### Japanese Imports and Exports.

The following is a statement of the principal imports and exports of drugs and chemicals from and into the ports of Yokohama and Kobe during January, February, and March, 1900. Our statement of statistics, covering from October to December, 1899, has been published in the *C. & D.* of April 28, 1900, page 733.

#### Exports.

|                            | Yokohama<br>Jan. to March | Kobe<br>Jan. to March |
|----------------------------|---------------------------|-----------------------|
| Acid hydrochloric ... lbs. | —                         | 26,300                |
| Acid citric ...            | 2,736                     | 19,480                |
| Acid sulphuric ...         | 49,600                    | 314,300               |
| Anisil ... piculs          | 30                        | 390                   |
| Bleaching-powder ... lbs.  | 6,000                     | 58,800                |
| Cop. sulphate ... cwt.     | —                         | 150                   |
| Camphor, crude ... piculs  | —                         | 5,626                 |
| Camphor, refined ... lbs.  | 540                       | 45,954                |
| Camphor oil ... piculs     | —                         | 954                   |
| Galls ...                  | 601                       | 2,462                 |
| Ginger, dry ...            | 2,423                     | 915                   |
| Ginseng ... cattles        | 97,872                    | 21,082                |
| Iodic potassium ... lbs.   | 930                       | 3,200                 |
| Iodoform ...               | —                         | 100                   |
| Iodine ...                 | 7,800                     | —                     |
| Manganese ... tons.        | 2,223                     | 396                   |
| Menthol ... cattles        | 1,727                     | —                     |
| Peppermint oil ...         | 1,800                     | 5,895                 |
| Soda crystals ... lbs.     | —                         | 235,350               |
| Wax, Japanese ... piculs   | —                         | 8,647                 |

#### Imports.

|                        |             | Yokohama<br>Jan. to March | Kobe<br>Jan. to March |
|------------------------|-------------|---------------------------|-----------------------|
| Acid, acetic, glacial  | ... kilos.  | 6,960                     | 15,400                |
| Acid, boric            | ... cwt.    | 1,010                     | 380                   |
| Acid, carbolic, cryst. | ... „       | 1,920                     | 350                   |
| Acid, gallic           | ... lbs.    | 672                       | 440                   |
| Acid, tannic           | ... cwt.    | 120                       | 50                    |
| Acid, tartaric         | ... „       | 248                       | 208                   |
| Acid, salicylic        | ... lbs.    | 31,688                    | 25,760                |
| Alcohol                | ... „       | 9,000                     | 56,500                |
| Aloes, Cape            | ... cwt.    | 70                        | 40                    |
| Alum                   | ... piculs  | 2,242                     | 1,543                 |
| Arsenic powder         | ... cwt.    | 100                       | 120                   |
| Ammon. carb.           | ... „       | 1,020                     | 475                   |
| Ammon. mur.            | ... „       | 102                       | 100                   |
| Antipyrin              | ... lbs.    | 1,100                     | 9,140                 |
| Acetanilide            | ... „       | 14,600                    | 25,200                |
| Balsam copaiba         | ... „       | 2,500                     | 1,500                 |
| Balsam peru            | ... „       | 2,400                     | 600                   |
| Bismuth subnit.        | ... „       | 24,800                    | 18,000                |
| Bismuth salicylate     | ... „       | 992                       | 440                   |
| Borax crystals         | ... piculs  | 216                       | 250                   |
| Cobalt, oxide          | ... lbs.    | 1,000                     | 500                   |
| Calcium carb.          | ... cwt.    | 321                       | 110                   |
| Cream of tartar        | ... „       | 90                        | 75                    |
| Creosote               | ... lbs.    | 5,240                     | 3,200                 |
| Cinchona               | ... „       | 10,430                    | 4,469                 |
| Cinchonine mur.        | ... „       | 1,000                     | 1,400                 |
| Cocaine                | ... oz.     | 1,200                     | 400                   |
| Creosote carb.         | ... lbs.    | 1,700                     | 2,050                 |
| Formaldehyde           | ... „       | 11,950                    | 2,200                 |
| Guaiacol carb.         | ... „       | 500                       | 550                   |
| Gum shellac            | ... piculs  | 95                        | 189                   |
| Glycerin               | ... cwt.    | 335                       | 360                   |
| Ichthyol ammon.        | ... lbs.    | 1,100                     | 1,100                 |
| Iodine resub.          | ... „       | 400                       | —                     |
| Iodoform               | ... „       | 900                       | —                     |
| Ipecacuanha            | ... „       | 600                       | 200                   |
| Jalap                  | ... „       | 4,500                     | 2,000                 |
| Morphine               | ... oz.     | 10,400                    | 960                   |
| Magnesia carb.         | ... cwt.    | 430                       | 70                    |
| Oil, cassia            | ... cattles | 3,800                     | 3,650                 |
| Oil, clove             | ... lbs.    | 2,000                     | 1,000                 |
| Potassium bromide      | ... cwt.    | 120                       | 120                   |
| Potassium chlorate     | ... „       | 820                       | 7,364                 |
| Potassium bichrom.     | ... lbs.    | 64,118                    | 82,294                |
| Potassium iodide       | ... „       | 8,000                     | 2,600                 |
| Potassium prussiate    | ... cwt.    | 50                        | 60                    |
| Paraffin wax           | ... lbs.    | 31,446                    | 949,392               |
| Phosphorus amorph.     | ... „       | 2,500                     | 53,400                |
| Phosphorus stick       | ... „       | —                         | 14,800                |
| Quinine mur.           | ... oz.     | 32,500                    | 5,000                 |
| Quinine sulphate       | ... „       | 36,000                    | 10,000                |
| Quicksilver            | ... lbs.    | 24,250                    | 20,525                |
| Rosin                  | ... piculs  | 1,441                     | 2,316                 |
| Saccharin              | ... lbs.    | 1,200                     | 1,400                 |
| Saltpetre, Indian      | ... piculs  | 1,493                     | 541                   |
| Saltpetre, Chilean     | ... „       | 1,497                     | 784                   |
| Saffron                | ... cattles | 434                       | 785                   |
| Santonin               | ... kilos.  | 500                       | 200                   |
| Soda ash               | ... cwt.    | 14,130                    | 25,752                |
| Soda bicarb.           | ... „       | 9,850                     | 6,750                 |
| Soda bromide           | ... lbs.    | 1,844                     | 1,764                 |
| Soda caustic           | ... cwt.    | 5,378                     | 14,064                |
| Soda hyposulph.        | ... „       | 100                       | 50                    |
| Soda salicylate        | ... lbs.    | 12,208                    | 11,424                |
| Soda silicate          | ... „       | 12,408                    | 33,200                |
| Sugar of milk          | ... cwt.    | 983                       | 444                   |
| Sugar of lead          | ... „       | 515                       | 120                   |
| Vaseline, white        | ... lbs.    | 64,167                    | 17,311                |

Comparing the above figures with those for the quarter ending December, 1899, we note substantial increases in the imports of alcohol, acetanilide, antipyrin, acid salicylic, acid tartaric, acid carbolic, bismuth subnit., caustic soda, glycerin, ipecacuanha, jalap, quinine, quicksilver, saccharin, santonin, sugar of milk, and a few others. Less quantities of cinchona, cocaine, copaiba, borax, &c., were imported. In exports there is a large decrease in menthol (5,754 cattles), refined camphor (30,401 lbs.), iodoform (1,550 lbs.). Increases are shown in crude camphor (494 piculs), camphor oil (247 piculs), peppermint oil (2,255 cattles), potassium iodide (1,155 lbs.), iodine (3,300 lbs.), and Japanese wax (517 piculs).

### American Peppermint-crop.

Messrs. C. H. Stuart & Co., of Newark, Wayne Co., N.Y., writing to us on July 3 say:—“We have recently made extensive inquiries among reliable farmers, distillers and growers both in our county and in Michigan, in order to get a thorough understanding of the peppermint-oil outlook. From the replies we make the following summary: In Wayne County, New York, the crop will run about what it has for the last three years, about 10 per cent. of a full crop. No old oil in growers' hands. In Southern Michigan the crop is estimated to be about half what it was last year. The planting this year looks good. There is about 15 per cent. of last year's crop still unsold. From Central and Northern Michigan conditions are not as favourable. The new crop is estimated to be about one-third of last season's. The new plantings are not doing quite as well, and about 10 per cent. of old oil is unsold.”

Messrs. McKesson & Robbins, of New York, wrote on July 6 as follows:—“From the most reliable sources we learn that there has been a much smaller acreage planted in peppermint this year than in the past two years. At the same time we must remark that the stock carried over is probably sufficient for a year's consumption if no crop had been grown. We look upon present prices as cheap, and think that they will gradually improve unless speculators take hold of the article and force the market up. Manufacturers, having a regular consumption for peppermint, are perfectly safe now in buying a year's stock.”

## Produce Notes.

### RUBBER GROWING IN INDIA.

The Indian Government, on the recommendation of Mr. Ribbentrop, Inspector-General of Forests, have just taken an important step in connection with the cultivation of rubber trees. It has been fully proved by experiment that the Brazilian tree will thrive, reproduce itself, and yield rubber of the best quality when cultivated on the Tenasserim Coast. The Government have therefore sanctioned the establishment of a plantation of 10,000 acres of these trees at a cost of 210,000r.

### VENEZUELAN TONKA BEANS.

The cultivation of tonka beans in Venezuela is the subject of an article in a recent issue of the *Jour. de Pharm.* The trees upon which the beans are grown are of a considerable size, having a dark green foliage. The fruits are oblong, resembling medium-sized mangoes in form. The flesh of the fruit is yellow, and has an unpleasant odour. An adult tree will yield 100 lbs. of the brownish violet flattened seeds. The ripening of the fruit takes place in August, but the harvest is prolonged for a considerable period, as both flowers and fruit occur on the same tree. In view of the ready demand for the “beans,” it is thought more extended cultivation of them would be remunerative.

### ECONOMIC PRODUCTS IN GERMAN EAST AFRICA.

Experiments with Vanilla growing at Mohorro, German East Africa, have proved a failure owing to a prolonged rainless season. Opium has also, so far, not been successful, but the cultivation of this plant has been commenced so recently that it is too soon to give a final opinion. The attempt to grow indigo has been more successful, and the harvest was gathered three months and a half after sowing. The preparation of the plant as a colouring substance was entrusted to Chinese, and a good rich blue was procured. In the Tapa district of Togoland kola-nut trees have been found in quantities far beyond expectation and plantations started, although the first trees from Cameroon failed, thanks to bad packing and to want of care on the journey.

SELL'S *Commercial Intelligence* have issued a specially-prepared map of China, showing the railways, canals, treaty-ports, steamship routes, foreign concessions, industries, &c. It is printed in colours, on stout paper, and can be had for 1s.

A TESTIMONIAL.—“I've called,” said the patent-medicine man, who was after a testimonial, “because I understand our tonic did you good, and—” “Yes,” the victim interrupted, “it did me good and proper. Two more bottles would probably do me completely. What! going? Good day.”

## At the Counter.

A SUBSCRIBER from the country was recently asked for “2d. Helix-a-Vitreal, pink.”

“LUMBAGO-BOTTLES” is the local name by which copal capsules are known in the Liskeard district of Cornwall.

IN BURMESE ENGLISH.—A sample order from Hsipu North Burma, is sent by a Rangoon correspondent. It contains the following items:—“Cabornic acid, iodine for goging powder, shlaye, papanmen oil, vesseling, outside zinc, croloidine.”

AN ITALIAN ATTEMPT.—An Italian count sojourning the sunny atmosphere of Wishaw, N.B., sends a local pharmacist the following request:—“Rp. Kreozot won pene. R. lodum won pene.” One pennyworth each of creosote and cotton-wool (“waddin”) were supplied.

A HAIR PROMENADE.—Mr. J. Ingall, of Ashford, thin the following order will take a lot of beating for quibleness:—“Would you kindly forward me 1 box of promona for clesning the hair off children?” There appears to be some subtle suggestion of appositeness between the ideas of a “promenade” and a “cleansing off,” but we can't quite explain it, unless it be that a constant “promenading” wears off hair as well as grass.

FROM THE KINGDOM OF FIFE.—A subscriber in the Northern Kingdom tells us that the other Sunday a smurchin called at his house, which is some distance from the shop, when the following conversation took place:—Smurchin Boy: “A want 1d. worth o' insect-poother.” Chemist: “That is not a very pressing want, my boy; you can get to-morrow morning.” S. B.: Ay, it is; it's for a hen that's flechs.” The same correspondent encloses a request in the original for “1d. worth of sweet righter for infulation the blether.”

QUEER REQUESTS.—The prime novelty in a batch of counter requests which we have received from a number of Northern correspondents recently is we think the request for “Kakodina plaster” written on the inside bottom of a match-box. The sides of the box are intact, which makes all the more funny. From the same correspondent “Hepdeldog” is a frequent request; and a cough-mixture formula contains “Heathia” besides the usual aniseed, pepper and laudanum. “Palmaceta,” “heart hawn and oil,” “yellow Barallagan,” “oil of rigrum” and “electro naphtha,” are obviously for outward application only, as such things as “sitzles,” “balsum hackey pivey” and “cupaste” are easy of interpretation to the experienced chemist. “Caustic in wine” and “one of hallaways” are slightly more difficult, and “1d. of Gali Sund” we confess has puzzled us. “Meloden soap” is the nearest one a customer could get. Vinolia, and the difficulty of an aspiration for the beauty when hampered by an imperfect education is exemplified in the request for “2d. pennyworth of parickgorrick deidgeane for dlying the hair Golden.”

WORTH SOMETHING AT LAST.—“Several of our hands at the front,” explained an assistant in a large West-End drug-store to a customer who had been kept waiting, “customer, being a lady, sympathised; but sympathy not what this young man wanted. ‘We're worth something at last,’ he pointed out, and it isn't often a chemist's assistant can afford to be independent. It's a wretched business considering the cost of the training. You're nearly as much to qualify as a chemist as to become a doctor; and in the end what are you? A man behind the counter! Yet you're expected to know as much as a doctor. If you saw all the throats and sore fingers—” the customer, hoping to escape details, sympathised again. “Ah, yes,” sighed the man, “it's very hard. I've got a brother who is a doctor; I know just as much as he does. I'm behind the counter, while he goes into society!” somebody else said “Kutnow's salts” very angrily, and a young man turned round in a leisurely fashion. “Yes, it's worth something at last,” he repeated, complacently. A pity that young man is in a chemist's shop. He ought to be in a Bernard Shaw play. [It is thus the *Daily Chronicle* Young Man sacrifices the chemist's assistant.—ED.]



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1/- Pint Bottles, 3/- per  $\frac{1}{2}$  gallon, and 5/- per gallon.

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1/- Tins; in 7 lb. Tins, 2/-; 14 lbs., 3/6; 1 lb. Bags, 5/6; 56 lb. Bags, 10/-.

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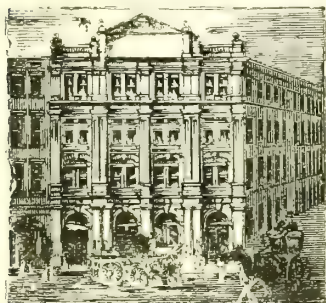
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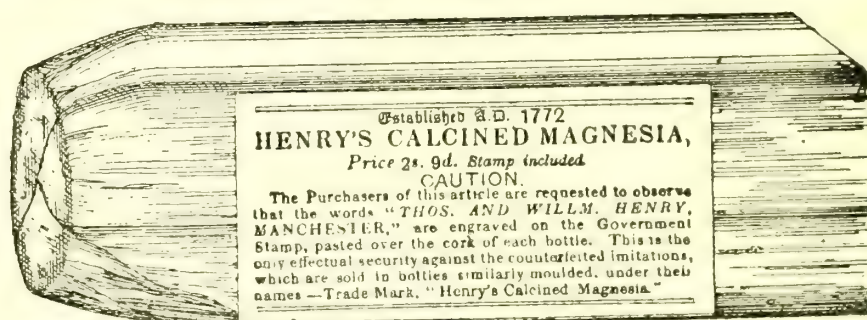
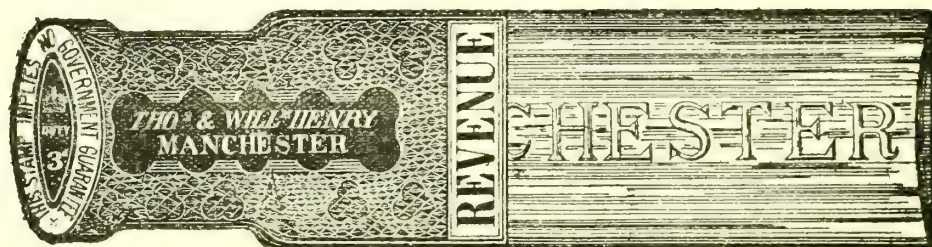
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ESTABLISHED A.D. 1772.

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**M**essrs. Thomas and William Henry, of Manchester, England, beg to inform the Trade generally that they continue to manufacture their old-established "CALCINED MAGNESIA" IN THE GREATEST CHEMICAL PURITY, and also wish to warn Buyers against the numerous spurious and very inferior imitations offered in various Foreign Countries. For the guidance of the Trade they submit facsimiles of their Bottle, wrapped and unwrapped.



THE LABELS CAN BE HAD IN ENGLISH, SPANISH, PORTUGUESE, OR ITALIAN.

Messrs. HENRY will be pleased to hear from Merchants who are suspicious of any Stock in their possession.

*The Magnesia may be had through all Wholesale Houses.*

Registered Trade Mark—"HENRY'S CALCINED MAGNESIA."

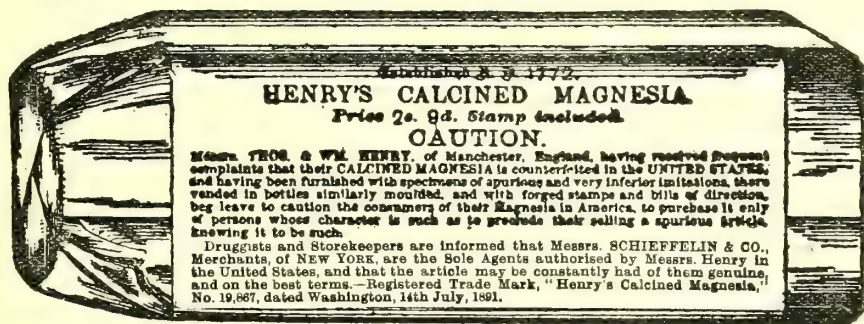


# **To the American and Canadian Trade.**

## **THE PROPRIETORS OF HENRY'S CALCINED MAGNESIA**

desire to warn the Trade in Canada and the United States that gross imitations of their Magnesia are being produced in France and elsewhere, and are offered to foreign buyers. These articles closely resemble genuine HENRY'S MAGNESIA, in respect to Containers, Labels, Wrappers, and Government Stamp, and deceive all but the most wary, until the so-called Magnesia is tried. The imitations are most inferior.

The sale of these articles in England is a felony punishable by penal servitude for a term not exceeding fourteen years. The very serious nature of the offence deters the unscrupulous packers of the forged articles from offering them in England, and the Proprietors would point out to the Trade in Canada and the United States that they have a simple means of judging the genuineness of HENRY'S MAGNESIA, on examination of the true labels, which are here reproduced in facsimile.



Merchants who suspect they have false goods are invited to communicate with

## **THOS. & WILLIAM HENRY, MANCHESTER,**

Or their Sole Agents for the United States,

## **MESSRS. SCHIEFFELIN & CO., 170-172 William Street, NEW YORK,**

Who are authorised to take legal proceedings against all infringements brought to their attention.

# SYRUP. HYPOPHOS. COMP.

## (DUNCAN'S.)

Some time since we had several samples of well-known SYRUP. HYPOPHOS. COMP. analysed by Mr. D. B. DOTT, F.R.S.E., F.I.C., Ph.C., and in no one case did he find so large a proportion of the active constituents as is found in our preparation by a precisely similar analysis—which analysis is an absolute proof that the proportions of the different ingredients which we state are in our Syrup are actually present. We therefore submit that from the use of our syrup the best results may be confidently anticipated. In proof of our statements we subjoin the report of Analysis referred to—

### Analysis of SYRUP. HYPOPHOS. COMP.

(GRAINS PER DRACHM.)

|                               | DUNCAN'S | No. 1 | No. 2 | No. 3 | No. 4 |
|-------------------------------|----------|-------|-------|-------|-------|
| Hypophosphite of Quinine..... | 25       | 14    | 11    | 69    | 12    |
| " Iron .....                  | 77       | 72    | 10    | 28    | 16    |
| " Manganese ...               | 27       | 22    | 00    | 16    | 18    |
| " Calcium .....               | 1.04     | 00    | 83    | 01    | 16    |
| " Potassium ...               | 1.00     | 68    | 1.48  | 24    | 29    |
| " Sodium .....                | 1.53     | 1.45  | 1.54  | 29    | 29    |

\*. The quantity of STRYCHNINE present was not determined. Our Syrup contains  $\frac{1}{10}$  grain in each fluid drachm.

## DUNCAN, FLOCKHART & CO.'S BAUMOL SOAP IN MEDICAL PRACTICE.

*Extract from a Paper read before the Medico-Chirurgical Society of Edinburgh:—*

"Messrs. Duncan, Flockhart & Co. have prepared a soap which is certainly superior to any superfatted soap which I have tried. This, registered as 'Baumol Superfatted Skin Soap,' is made of the purest fat, contains no cocoa-nut oil, nor any objectionable ingredient, and is not only perfectly neutral, but is superfatted to the extent of 3 per cent. It will be found to keep well, to be most pleasant in use, reasonable in price, and for all toilet purposes perfect; but 'it won't wash clothes.'"

*From the "Edinburgh Medical Journal," December, 1891:—*

"We have submitted Duncan, Flockhart & Co.'s Baumol Soap to the most powerful tests, and have no hesitation in expressing the opinion that it is incomparably the best soap we have ever used. It can be confidently recommended as unsurpassed for the nursery, for shaving, and general toilet use."

## GELATINE CAPSULES, <sup>1,500</sup> Varieties.

CASCARA CAPSULES.

EASTON SYRUP CAPSULES.

GREGORY POWDER CAPSULES.

## BLAUD PILL CAPSULES.

GUARANTEED STRENGTH.

WE GUARANTEE OUR ONE, TWO, AND THREE PILL CAPSULES TO BE EQUAL RESPECTIVELY IN FERROUS CARBONATE TO ONE, TWO, AND THREE FRESHLY-PREPARED BLAUD PILLS. THEY HAVE ALSO THIS DISTINCT ADVANTAGE OVER PILLS, THAT THEY NEITHER OXIDISE NOR HARDEN.

THE ABOVE MAY BE ORDERED THROUGH ANY WHOLESALE OR RETAIL DRUGGIST.

**DUNCAN, FLOCKHART & CO.,** MANUFACTURING CHEMISTS, **EDINBURGH.**

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"Dunbart London."

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Telephone—  
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282 Holborn.



# CHLOROFORM

Sp. Gr. 1.490

## DUNCAN

Pure.

Methylated.

## The Glycerophosphates

### Fluid Extract of Malt

WITH THE

### Glycerophosphates

CONTAINING

Calcium, Sodium, Potassium,  
Iron and Manganese  
Glycerophosphates.

Dose : 1 to 4 drachms.

THESE Salts, originally introduced to medicine by Dr. Robin, of Paris, have been successfully used on the Continent in the treatment of Neurasthenia, Bright's Disease, and in all cases where it is desirable to administer Phosphates.

DUNCAN, FLOCKHART & CO. beg to draw attention to their preparations of these Salts :—

Fluid Extract of Malt  
with the  
Glycerophosphates.

In this preparation the original idea of Dr. Robin's of prescribing digestive ferments with these Salts is embodied, while the addition of the Malt gives it a nutritive value of great importance in wasting diseases.

Syrup  
Glycerophosphatum  
(Duncan),

Containing the Salts of Calcium, Sodium, Potassium, Manganese and Iron, with the addition of Caffeine. This combination is highly palatable, and the stimulant action of the Caffeine prevents any tendency to cause nausea during prolonged administration.

### Syrup OF THE Glycero- phosphates (Syr. Glycerophosphatum) Duncan.

EACH FLUID DRACHM  
CONTAINS :

|                           |                     |
|---------------------------|---------------------|
| Calcium Glycerophosphates | 1 gr.               |
| Sodium                    | „ $\frac{1}{2}$ gr. |
| Potassium                 | „ $\frac{1}{2}$ gr. |
| Manganese                 | „ $\frac{1}{2}$ gr. |
| Iron                      | „ $\frac{1}{4}$ gr. |
| Caffeine                  | „ $\frac{1}{2}$ gr. |

**DUNCAN, FLOCKHART & CO.**  
**EDINBURGH & LONDON.**

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## IMPERIAL BRAND.

### IMPERIAL

### QUININE

### CO.

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SHIPPING ORDERS  
in  
every kind of Package  
(as required)  
receive  
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for India, China, Japan,  
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treated liberally.



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**ACIDS**—HYPOPHOSPHOROUS, PHOSPHORIC, s.g. 1,750 and 1,500, and VALERIANIC.

**AMMONIA**—Nitrate, Oxalate, and Valerianate pure dry Crystals.

**ANTIMONY**—Crocus, Oxide 98 per cent., Sulphide, Golden Sulphuret, and all Antimonial preparations.

#### SPECIALITIES—

**ESSENCES**—Apple, Pear, Pineapple, Raspberry, and Strawberry, and all Fruit Essences.

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**ESSENCES OF LEMON, BERGAMOT, & ORANGE**, guaranteed absolutely genuine; unadulterated.



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Iodides of Potassium and Sodium  
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is acknowledged by eminent Medical Authorities at home and abroad to be

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It is an almost **TASTELESS** and **ODOURLESS POWDER**.

It contains nearly **80%** of **MEAT ALBUMEN**.

It acts directly as a **TONIC** and creates an **APPETITE**.

It is **not** a drug, but a **THERAPEUTIC FOOD**.

It is easily **SOLUBLE** in Water, Milk, Soup, Coffee, Cocoa, &c.

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Contains the tonic qualities of **IRON** combined  
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Causes no **GASTRIC DISTURBANCE**  
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Does not **AFFECT THE TEETH**.

Is a freely **SOLUBLE** preparation of **IRON**

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Contains the **ALBUMINOUS MATTER**  
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Is slightly **ASTRINGENT** and **NON-IRRITANT**.

Is most suitable for **STRENGTHENING**  
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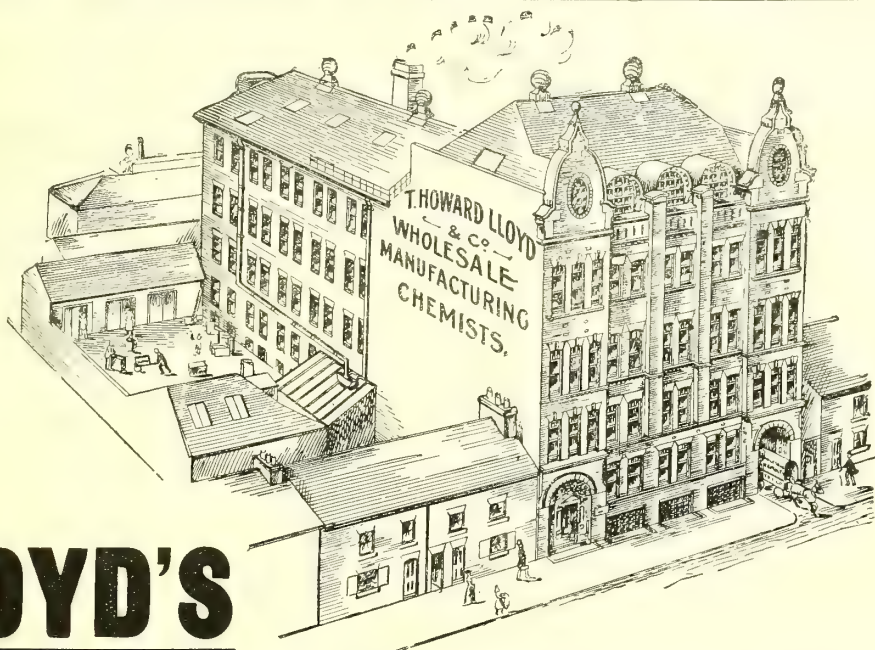
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| Pil. Aperiens (105) ..   | 3d. ..    | 2/6 ..  | 2/-             | Pil. Blaud (371) ..                                                               | 2d. ..     | 2/-     | 1/6           |
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The most reliable Capsules yet introduced.

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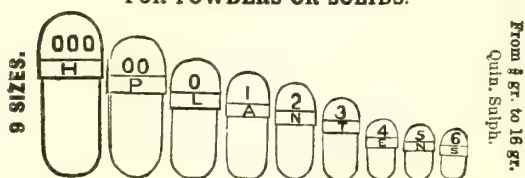
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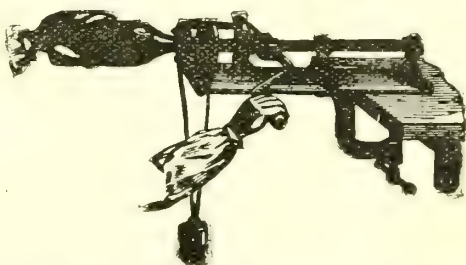
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A single pull of the lever  
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Patentee—**C. MELIN, 37 Crutched Friars, LONDON, E.C.**

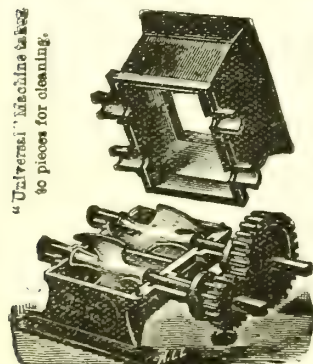
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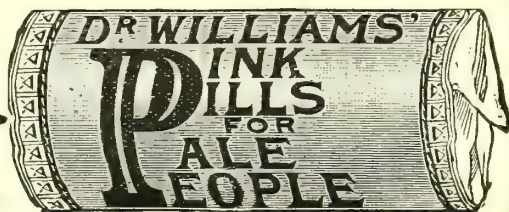
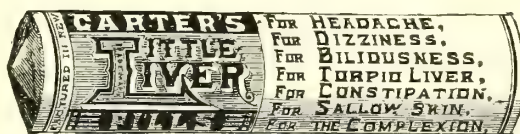
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All export indents must state the market for which they are intended, as orders cannot be executed by us for the subjoined markets, where special agencies have been established, and a distinctive form of wrapping and packing adopted, including directions for use in the necessary languages.

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**GOOD PROFITS GUARANTEED.**

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Has been placed on the **P.A.T.A. LIST**, and the  
minimum retail prices are for

|            |            |            |             |
|------------|------------|------------|-------------|
| 1/1½       | 2/9        | 4/6        | 11/-        |
| <b>1/-</b> | <b>2/6</b> | <b>4/-</b> | <b>10/-</b> |

**Prices to Trade:**

**9/- 23/6 38/- 95/-** per dozen.

This preparation does not contain any poison which is included in Part 1, Schedule A, of the Poisons Act; therefore the Signature of the purchaser is not required.

Chemists who study their own reputations should never be thoughtless enough to sell an imitation Chlorodyne. Any first-class old-established Chemist will tell you that Dr. Browne's preparation is the only genuine Chlorodyne.

I have placed the Original Chlorodyne on the Protected List because, although about 25 per cent. only of the Chemists have seen fit to actually join the P.A.T.A., I have reason to believe that a large majority is in favour of a guaranteed profit.

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Opium. Assayed and percentage of Morphine stated.

Tinct. Opii B.P. Standardized.

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### PURE TASTELESS COLD DRAWN PHARMACEUTICAL.

This Oil is guaranteed absolutely Cold Drawn, and is of exceptional brilliancy and purity.

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PILLS MADE TO SPECIAL RECIPES.

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Extract of Malt prepared in vacuo.

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### *Concentrated Fruit Essences.*

### GRANULAR EFFERVESCENT SALTS. • SCALE PREPARATIONS.

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### Dalmahoy's Eau de Mente Pectorale,

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quotations.

**THE CHEMIST  
AND DRUGGIST**  
Sept. 9th, 1899,

says:—"The Resins  
Podophyllin and Scam-  
mony are also manufac-  
tured by the firm, as they use  
large quantities of them in their  
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pure, the Podophyllum-Resin being  
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are sometimes added to facilitate precipita-  
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IS EXTENSIVELY USED IN THE PRINCIPAL HOSPITALS AND INFIRMARIES.

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## MANUFACTURING CHEMISTS

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 ETC., ETC.
 

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A powerful Antispasmodic and Sedative for *mental and physical nervous diseases*, hysteria, neurasthenia, neuralgia, &c.

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WHOLESALE IMPORTERS & EXPORTERS OF ALL  
**FRENCH and GERMAN**  
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**GOODS NOT  
In STOCK  
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**DESICCATED MALT EXT.**  
(Wilcox).

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**Compare the Prices of**  
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|                                            | Per<br>1,000 | Boxes of<br>36<br>per doz | 24<br>per doz. |
|--------------------------------------------|--------------|---------------------------|----------------|
| Cascara Sagrada = 30 m fl. Ext. ...        | 10/-         | 6 6                       | 4 7            |
| Copaiba, m v ...                           | 5/-          | 3 9                       | 2 6            |
| " m x ...                                  | 7 3          | 5 -                       | 3 9            |
| Creasote (Beechwood in almond oil) m i ... | 7 6          | 5 -                       | 3 9            |
| " " " " m i i i ...                        | 8 6          | 5 11                      | 4 1            |
| Ammoniated Quinine = 30 m Tinct. ...       | 12 6         | 8 -                       | 5 7            |
| Santalwood Oil, m v ...                    | 18 -         | 11 -                      | 7 7            |
| " " m x ...                                | 24 -         | 14 -                      | 10 -           |
| Syr. Eastonii = 30 m ...                   | 16 -         | 10 -                      | 7 -            |

**WILCOX, JOZEAU & CO., 49 HAYMARKET, S.W.**



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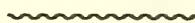
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Pharmaceutical Preparations of Guaranteed Purity and Strength.  
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Although many new hypnotics and analgesics have been recently introduced, NEPENTHE still holds its position as THE hypnotic and sedative *par excellence*. "Nepenthe" is registered under the Trade Marks Act, and is our sole property. No other preparation should be substituted when Nepenthe is ordered in a prescription.  
Sent out in bottles bearing a label in white letters upon a green ground. We prepare also Double Strength Nepenthe, and Glycerole of Nepenthe (eight times the single strength) for hypodermic injection.

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THE ORIGINAL PREPARATION.

Report of "THE PRACTITIONER":—

"Experience has shown this preparation to possess the same efficacy as Santal Oil itself. It mixes perfectly with water, and has a taste by no means disagreeable, in which particular it contrasts very favourably with the ordinary mixture it is intended to replace."

To ensure obtaining this preparation, please write: "Liq. Santal Flav. c. Buchu et Cubeba (Hewlett's)."  
Price 10s. 6d. per lb. packed, for dispensing only, in 10, 22, 40, and 90-oz. Bottles.

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Acids, Æthers, and other Chemicals carefully tested and packed for Export.

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**Antim. Crocus**

**Bismuth Salts**

(Special Prices for Contracts).

*Bismuth Carb., B.P.*

(FREE FROM NITRATES).

**Sp. Æther. Nit., B.P.**

(MADE FROM DUTY PAID SPIRIT).

**Sp. Ammon. Arom., B.P.**

(MADE FROM DUTY PAID SPIRIT).

Liq. Ammonia, Soldering Fluids, &c., and Preparations of Alum, Animal Charcoal, Antimony, Baryta, Strontia, Zinc, &c.

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*Telegraphic Address*—"ETHER METHYLATED LONDON."

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Reprint from the **British and Colonial Druggist**,

April 6th, 1900.



A LEADING  
LONDON  
DRUG HOUSE.

# WRIGHT, LAYMAN & UMNEY, Ltd.

THE operations which naturally fall within the business of a wholesale druggist, both in buying the crude material and manufacturing it into galenicals or otherwise preparing it for the retailer, possess, in addition to the ordinary interest for pharmacists attaching thereto, a considerable educational value, and every one

selection can be made than the firm whose name heads this article.

Having thus, as it were, introduced our subject to our readers, we think it will not be out of place to give a short history of the firm whose foundation as a wholesale business some, at least, of our readers will recall.



OFFICES AND DESPATCH WAREHOUSE, SOUTHWARK STREET, S.E.

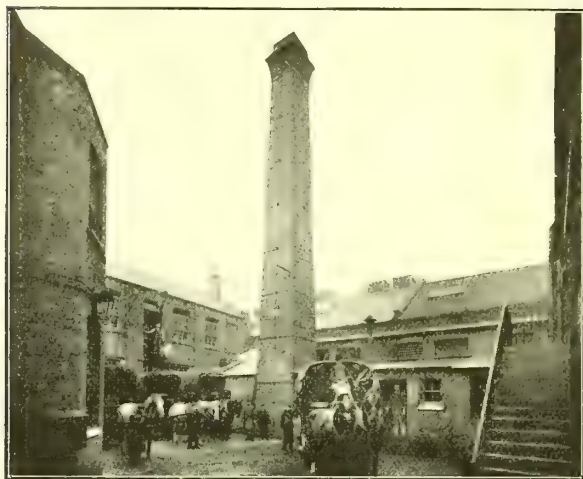
should take an opportunity of visiting the drug markets, and also of inspecting the premises, stocks, &c., of a representative drug house. To those especially who have not recently been over the departments of such a house as we have indicated we hope that these few columns will not only be of interest, but that they will be, at least, of some real value. For the purpose we have in view no better

## HISTORY OF THE FIRM.

The concern may be said to have originated about 100 years since in Old Fish Street, City, and with the business carried on by one Curtis. It is recorded in "The Progress of Pharmacy" (Bell and Redwood) that Curtis was a signatory to a resolution passed at a meeting of chemists and

druggists, at Freemason's Tavern, on March 4th, 1813, amongst his co-signatories being Allen, of Plough Court; Bell, of Oxford Street; Savory, of Bond Street, and others.

The business, however, did not become a *bona fide* wholesale one until a little after the middle of the present century, when it was taken over by two pharmaceutical chemists,



GENERAL VIEW OF FACTORY, PARK STREET, S.E.

both of whom had gained their experience in the historic house of John Bell & Co., namely, the late W. Valentine Wright and the late George B. Francis. The business continued beneath the shade of the Monument for some time, and until the premises were required by the City Corporation for improvement purposes.

The compensation paid formed "a bone of contention" between the two partners, and they eventually parted, Francis joining the historic house of Hearon and McCulloch, and Wright beginning his new business in his own premises in what was then known as New Street, Southwark, now Southwark Street. He was joined in 1871 by John Sellers and Charles Noel Layman, who had previously been in business in Bunhill Row.

In 1875 Sellers retired, and Charles Umney, who had been with John Bell and Co., and for many years with Herrings and Co., their chemist joined the firm. In the following year Wright died and for 17 years subsequently the business was carried on by Charles Umney and C. Noel Layman in partnership with Wright's widow as a sleeping partner.

A re-construction of the partnership followed, the drug concern and Wright's coal tar speciality business being amalgamated, and the partners, in addition to Chas. Umney and C. N. Layman, eventually were H. Cassin Wright, son of the late W. V. Wright, E. Blakesley Layman and F. Noel Layman, sons of Mr. Layman, and John C. Umney and Ernest A. Umney, sons of Mr. Umney.

H. Cassin Wright qualified as a pharmaceutical chemist in 1885, and John C. Umney, after taking the bronze and silver medals for practical chemistry, at the Pharmaceutical Society's School, Bloomsbury Square, qualified as a pharmaceutical chemist in 1889, and subsequently was occupied in the Research laboratory. A few years later E. A. Umney qualified as a pharmaceutical chemist, and took the silver medal for practical chemistry at the Pharmaceutical Society's laboratory.

The partnership was, in January, 1899, converted into a private company, the partners enumerated remaining as directors, and Charles Umney as managing director.

The business is now carried on in three separate buildings: (a) Union Hall, used as a warehouse for crude material; (b) 48 and 50, Southwark Street, S.E., which contain the offices, packing and dispatching departments; and (c) 66 and 68, Park Street, Southwark, which is mainly devoted to the drug milling and manufacturing departments.

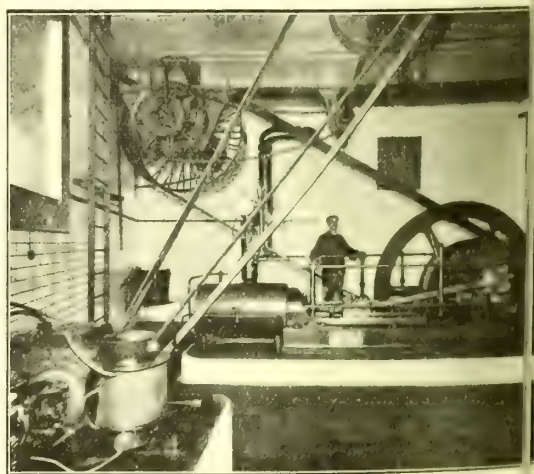
Down to 1895 the whole of the business was carried on at 48 and 50, Southwark Street, but, like all concerns which are conducted with business ability and energy—and these two qualities the heads of the firm have possessed in plenty—the increase both in the volume of trade and the variety of the operations carried on, rendered the then existing premises too small, and Union Hall was acquired, and in 1897 further buildings which had long been urgently needed, and which the difficulty of finding a place suitable, both in locality and construction, had alone delayed, were secured in Park Street.

We will commence our survey, which was gone through in the main under the guidance of Mr. John C. Umney, with a look round Union Hall.

## DRUG WAREHOUSES.

Union Hall was in the early part of this century Justice Hall, and then subsequently a religious meeting house, and was perhaps not less noteworthy than many other buildings in the old Borough of Southwark. Later on it was utilised by Pickford and Co., the well-known carriers, as a receiving house, chiefly on account of its spacious ground floor. This now, together with the upper floors, is used for the storage of crude drugs, &c. The total floor space available is about 16,000 square feet, and when we visited it there was little, if any, vacant room. As might be expected, Wright, Layman and Umney are large buyers on the London drug market, and to a small extent they purchase on the Liverpool market. The wholesale druggist who wishes to prosper and to serve his clients to the best possible mutual advantage has to watch keenly and to anticipate the rise and fall of prices, and that he may take full advantage of his experience and acumen, it is necessary that he should have plenty of warehouse room wherein to keep the goods which he has purchased at a favourable moment. Drugs are bulky articles, and to store them in outside premises soon run away with any profit accruing from judicious purchase, and the cartage in small quantities to the premises, besides the great inconvenience it entails, is also a great expense. Hence the advantages of the possession of a building like Union Hall was immediately felt.

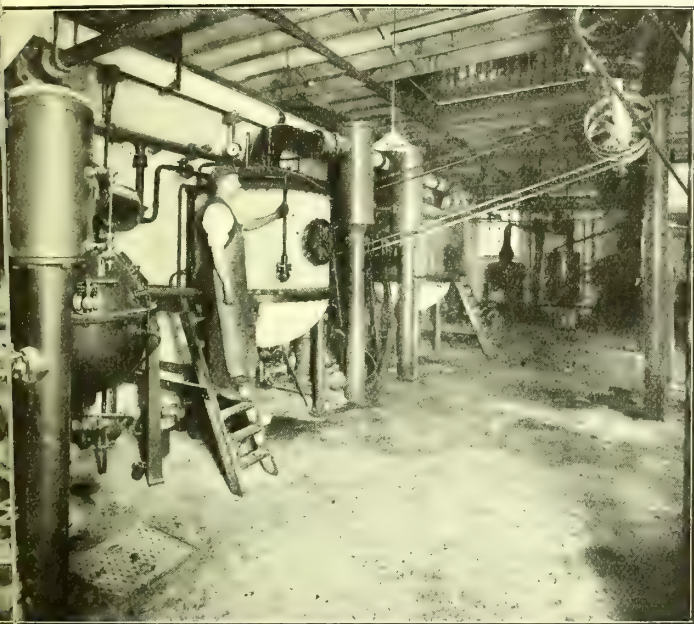
Here are often to be seen as many as 20 tons of Jamaican and other varieties of honey, and many tons of such commonly used drugs as senna, cascara, licorice, gentian, &c. A crane worked by a gas engine connects the three floors and is used for hoisting and lowering the huge bales.



ENGINE AND DYNAMO ROOM.

Such odoriferous drugs as aloes, benzoin, &c., are stored in separate rooms. A glance round the floors reveals a bale upon bale of sarsaparilla, cinchona (East Indian) and ipecacuanha in skin serons, orris, senna, cubebs, all serpenty, &c., in their various packages. The firm's





A CORNER OF THE VACUUM PAN AND STILL ROOM.

pleased to show their premises to students, and a Union Hall cannot fail to be of great assistance in preparing for examination.

## THE OFFICES AND PACKING FLOORS.

From Union Hall we come to the main establishment, Southwark Street. No. 48. Southwark Street is the ground floor as the offices of the company. These are very spacious and convenient, and are lighted throughout by electricity and fitted with ventilating fans.

It is in which Mr. Chas. Umney keeps a full and complete system. Every purchase by the firm is entered in a book of notes as to quantity, quality, price, and with fuller details of analytical examination, &c., in the warehouse book.

The basement of No. 48 is used as a storage room for dry goods, such as soda, soda bicarb, &c., which are received in bags as received.

The three large upper floors of this building are devoted entirely to packed pharmaceuticals; the floors are clean, lighted by electric light, heated with steam pipes, and the class of labour employed for packing purposes is of the highest grade.

On the first floor may be seen a room set aside entirely for the storage of labels, and a space over the various hand-lithographed and copper-plate labels makes it evident how the company has succeeded in building up in a short time the large business that it does in packed pharmaceuticals. A store in packed goods is a sign of the times. It is only a few years since the regular drug houses have been the supply of such specialties. A portion is devoted to printing machines, &c., and practically all the ordinary druggists' labels are printed

on the premises, although, of course, not the lithographed and copper-plate labels, which cannot be done advantageously, except by large firms of printers and lithographers.

The other floor is devoted to the analytical and research laboratory of the company, and considerable pains is taken in the conduct of this department. Every chemical purchased (of course, the manufacture of chemicals on a large scale cannot be carried on at Southwark Street) is examined, and the report on the same approved by John C. Umney, the director controlling this department, before such chemical is passed into stock for distribution, and the most thorough check is kept upon all the pharmaceutical preparations of the company made at their factory at Park Street in addition to the careful standardisation of such alkaloidal preparations as are scheduled in the British Pharmacopœia. Four or more well-trained assistants are constantly at work, and the extension of this department, although involving a considerable outlay, is absolutely necessary for the carrying on of pharmacy on "up-to-date" lines.

Before leaving this house we may mention that the firm make a full series of excellent medicated as well as toilet soaps, which are put up in appropriate styles.

We now come to 50, Southwark Street. The basement here contains fireproof vaults, extending underneath the pavements of Southwark Street in a series of brick arches, which contain several thousands of pounds worth of the more expensive goods used by pharmacists, such as otto of rose, musk, essential oils, quinine, quicksilver, alkaloids, &c. These vaults have already stood intact through one fire. The remainder of the basement is occupied by spacious tanks of the various fixed oils, the tanks being of 200 to 600 gallons capacity.



A CORNER OF THE STEAM LABORATORY.



The division of this basement formerly occupied by drug mills, is now used for the export packing department, and here may be seen at any time quantities of tinctures and medicinal spirits being packed under the supervision of the Excise officers for exportation under drawback. This department of the business has developed considerably of late years, as the authorities are gradually adopting a more enlightened policy, and it is well known what an important part Mr. C. Umney played in the obtaining of such drawback for the trade some eight years since, and his son, John C. Umney, has taken considerable part in obtaining the later concessions granted.

The ground floor is devoted to home packing department, and the company make a point of despatching all goods for the suburbs of London on the same day as order is received, as well also as the consignments by light carriers, such as Sutton and Foster, which are very numerous.

The first floor, covering over 5,000 square feet, is used as a wet floor, and earthenware standards for all pharmaceutical preparations are neatly arranged on a system which it seems to us leaves nothing to be desired. Every care is taken in the putting up of poisons, and every weighing of a scheduled poison is witnessed by a second assistant, who adds to such weighing his initials as having witnessed same on a special label fixed to the bottle, and thus the responsibility of any operation can be readily traced.

The second floor is devoted to the perfumery room and the dry goods floor, and here a separate room is apportioned for the storage of alkaloids, virulent poisons, &c., under lock and key, which are only handled by a qualified assistant, and their weighing also duly attested by signature.

In the perfumery department great strides have been made and every effort is made to keep pace with the modern developments of perfumery dependent upon the introduction of valuable sythetic materials, &c.

The next floor is devoted also to dry goods, and contains small quantities of the principal drugs in use neatly stored in covered tins as standards, the bulk of which are stored at Union Hall, and have already been referred to.

The upper floor, which formerly was used as a manufacturing laboratory, is now devoted to a bottle store and has been neatly partitioned, shelved and divided, and contains many thousands of various bottles ordinarily in use. The firm's stock of bottles is a valuable one, and is worth, owing to rise in prices, about 20 per cent. more than its cost.

The total floor space of 48 and 50, Southwark Street is nearly 30,000 square feet.

## THE MANUFACTURING DEPARTMENTS.

The Park Street premises, where one of the directors, Ernest A. Umney, is always in attendance, were formerly in the occupation of sweetmeat manufacturers, and were suitable for adaptation to the firm's requirements from the fact that the buildings were more or less divided the one from the other. The building consists of an irregular pentagon, and on the one side has been built a new chimney stack and boiler house in which has been placed a new Galloway boiler of the latest type.

The large open yard which this building surrounds makes it very convenient for the entrance of vans, &c., for the company's stables which have been removed there. There is no need to refer to the offices, which are well arranged, and lighted by electricity; but we pass to the first manufacturing department—viz., the soap milling department.

The installation consists of two complete series of milling and squeezing machines, capable of turning out at least one ton of tablets of milled soap every day. Leading from this soap manufacturing department is a drying room fitted with racks in which, by means of hot air, at least half ton of water can be removed from soap in shavings daily.

The next floor above is devoted entirely to the manufacture of pills, in which department great progress has latterly been made. Here the various massing, piping,

cutting, rounding, and coating machines may be seen in process. The firm now keep pills represented by 700 formulæ in stock.

The next floor above is devoted to compressed tablets and all kinds of medicinal, photographic, perfume tablets for bath, &c., and also effervescent tablets containing the usual mineral salts such as citrate of lithia, citrate of soda, sulphate of soda, &c. The coating of tablets in various ways is also carried on in this department, and the recent introduction of Cascara chocelettes coated with chocolate has been a distinct success, and large quantities are now being turned out.

Passing through the ground floor of this building we come into the drug-milling department, which consists of a huge room sub-divided into three parts, the walls being covered with white glazed tiles. This makes the mills exceedingly light and naturally very readily cleaned, which is an important point. In one room is a large edge-runner devoted entirely to the powdering of white drugs, such as acacia, tragacanth, &c. The next room contains two large edge-runners and stampers used for various gums, &c., whilst the third mill room contains one edge-runner enclosed and used more especially for the grinding of umbelliferous fruits. Each room is provided with its own special sifting frames working by machinery, &c. with every possible arrangement for the rapid and economical grinding of drugs. A pair of horizontal mill stones, which can be adjusted so that sifting is not required, is also kept for cream of tartar, sugar, &c.

On the upper floor is a powerful disintegrator used for the crushing of drugs more difficult to reduce to powder, such as nux vomica, scammony root, &c., the remainder of this floor, which is asphalted and of very large dimensions, being used for the storage of manufactured pharmaceutical preparations.

Coming to the third building facing the yard we enter, is the vacuum pan and still room. The vacuum pan room is fitted with three very large vacuum pans used for the preparation of extract of malt and various pharmaceutical extracts in which concentration at low temperature is a necessity, and the output of extract of malt is very considerable.

The smaller still room, leading from this vacuum pan room, is devoted to stills for the preparation of nitre, sal volatile, &c., &c. In the corner of this room is a ship's condenser, for the preparation of distilled water. This has been erected at a cost of several hundred pounds, because it has been found necessary, in order to prepare distilled water of the almost absolute purity required by the British Pharmacopœia, that the latest precautions shall be taken. The distillatory apparatus in use is precisely the same as is fitted in the P. & O. steamers and other large services. Leading from the vacuum pan room is a steam laboratory, in which may be seen many open steam jacketed pans, fitted with the most modern stirring machinery, boiling pans, steam digester under pressure, and also elaborate machines for the expression of pomades by spirit for the preparation of pomades, ointment mixing machines, worked by steam power, &c., and a large hydraulic press, capable of exerting 10 tons pressure to the square inch, which is used for the expression of fresh juices, such as dandelion, conium, &c.

The upper floor is devoted to the percolating room, and percolators almost innumerable may be seen used for the treatment of large quantities of the milled drugs that are required for scammony resin, jalapin, euonymin, &c., of which the company are very large producers.

Leading from this main percolating room are rooms devoted respectively to the manufacture of citrate of iron and quinine and effervescent preparations.

Before finishing our tour we visited the engine room, in which is at work a new Galloway engine of over 20-h.p., and a dynamo for the generation of electric light for the lighting of the premises, and this is supplemented in case of a "break down" and for urgent work by two portable gas-engines.

The premises at Park Street have needed much alteration to fit them for their present functions, a great part having to be rebuilt, and they now constitute one of the best-fitted manufacturing laboratories in the Kingdom.



# Christia

**A really Advantageous Substitute for  
Oiled Silk and Guttapercha Tissue.**

It does not deteriorate with keeping. **Christia** is also of great value to Tourists and Travellers as a water and grease-proof material.

**Christia** is supplied largely to the Admiralty, War Office, and India Office. It is particularly well suited for tropical climates. In addition to being waterproof, it is unaffected by Chloroform, Alcohol, Ether, Oil, Grease, and other solvents of a similar nature.

**Price of CHRISTIA, 1s. per yard, 40 inch wide.**

|               |        |                            |
|---------------|--------|----------------------------|
| In 6d. Boxes  | ... .. | at 3s. 3d. dozen, subject. |
| In 1s. „      | ... .. | at 5s. 6d. „ „             |
| CHRISTIA LINT | ... .. | at 2s. 6d. per yard „      |



# THOS. CHRISTY & Co.,



**4, 10 & 12, Old Swan Lane,  
UPPER THAMES STREET, LONDON, EC.**



## Glasscine Labels.

**A Novelty in Shop Labels.**

They are flexible, but transparent like glass.  
They can be cut to any desired shape, but cannot be broken.

### GLASSCINE LABELS

Have all the good qualities of Glass Labels without any of their objectionable ones.

**THEY ARE EASILY FIXED TO SHOP ROUNDS.**



*Full Particulars on application.*





# Evergreen Colors.



**For Coloring Perfumes, Toilet Preparations, &c.**

**EVERGREEN COLORS ARE FAST TO SUNLIGHT AND ARE SUPPLIED IN VARIOUS SHADES.**

\*\*\* **One ounce Evergreen will color 10 gallons.** \*\*\*

These colours are perfectly soluble and non-poisonous. They are most useful for coloring toilet preparations, perfumes, tooth washes, elixirs, syrups and extracts. They are perfectly staining and non-poisonous, miscible in alcohol, water, acid and alkaline solutions.

We hold a stock of the following colours: Green, Foaming Ruby, Purpleine, Cousine Red, Yellow, and

**EAU DE QUININE COLOR.**

This too belongs to the Evergreen series and when used with our formula produces an Eau de Quinine Tonic not to be distinguished from the best imported kind.

**All Evergreen Colors are supplied at 4 6 per 2-oz. bottle.**



**The Inner Tube of this Container prevents blocking of opening.**

**THE FLOW OF THE LIQUID CAN BE INSTANTLY STOPPED WITHOUT REPLACING THE CAP.**

Erect Tubes, with Screw Nozzle and Inner Tube, 30 grms capacity.....

Ditto, Ditto, 50 grms. capacity

Erect Tubes, with Inner Tube and 2 Screw Nozzles for thick and thin stream, 50 grms. capacity



**Stearns' Wine of Cod Liver Oil, Stearns' Kasagra (Cascara Aromatic), Stearns' Dike's Pepsin 1-3000, Stearns' Instant Headache Cure, and all other preparations of Messrs. Frederick Stearns & Co., Detroit, U.S.A.**

**Pictet's  
Ethyl  
Chloride.**



## VITOGEN.

(G. F. Harvey Co., Saratoga Springs, N.Y.)

## FORBES' DIASTASE.

TERRALINE,  
(Hillside Chemical Co.)

HOLMES' FRAGRANT FROSTILLA.  
(Clay W. Holmes, Elmira, N.Y.)

## GLYCO THYMOLINE.

BERMINGHAM NASAL DOUCHE.  
(Kress & Owen Co., New York.)

## TABLET TRITURATE MOULDS. FERALBOID.

A peptonised albuminate of iron. Easily digested and quickly assimilated. (The Argol Co., Danbury, Connecticut.)

## LYPTOL.

A perfect antiseptic ointment for surgical uses. (The Argol Co., Danbury, Connecticut.)

## THIALION.

A laxative salt of lithia. (The Vass Chemical Co., Danbury, Conn., U.S.A.)

## HYDROZONE.

## GLYCOZONE.

## EYE-BALSAM.

Chas. Marchant

## GLANDULEN.

A peptic remedy for indigestion.

## PUTNAM FADELESS DYES.

These are absolutely reliable, and never fade on most fast-coloured goods. Novel advertising features.

## FLUORINE PREPARATIONS.

Fluor. Reagent. Valentin & Schwarz, Leipzig.

## MALARIN.

An antipneumonic and antimalarial without any influence on pulse or respiration; very quick in its action. (Valentin & Schwarz, Leipzig.)

## IODALBACID.

Contains Iodine and Albumen, chemically combined. It is perfectly soluble in the system it does not produce Iodism. (L. W. Gaus, Frankfurt, a/M.)

## URICEDIN.

Largely recommended for Gout. (J. E. Stroschein, Berlin.)

## PURO MEAT JUICE.

## TYREE'S ANTISEPTIC COMP.

## TYREE'S HYPOPHOSPHITES COMP.

## TYREE'S LITMUS PENCILS.

## ANDERSON'S VAGINAL CAPSULES.

## SOCIÉTÉ FÉDÉRALE DES PARFUMIERS DE FRANCE, PARIS.

## R. W. GARDNER, NEW YORK.

(Syrup of Hydriodic Acid.)

## STRONG'S ARNICA TOOTH SOAP.

## GLUTOID CAPSULES.

## AMYLOFORM.

## SERVATOL SOAP.

## STERILIZED SUTURE SILK.

## DECO BATH MATS OF COMPRESSED WOOL.

## FILMOGEN.

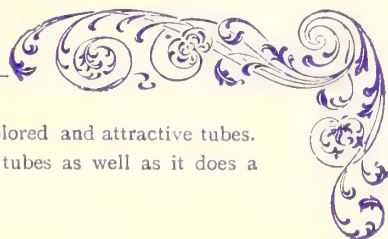
## DENTAL FILMOGEN.

## SPINOL.

## BENZOINOL.



# Handsome Collapsible Tubes.



We offer special facilities to Chemists for putting up their own preparations in beautifully colored and attractive tubes. The Filling Machine as shown in the accompanying illustration will manipulate a few tubes as well as it does a large number.

## PRINTING.

We print Chemists' names and other wording on the tubes without charging for the die for orders of 3 to 4 gross, and we also hold a stock of tubes printed with names of contents. The following are in stock at the present moment in assorted colours:—

**Cold Cream, No. 7.**  
**Lanolin Cold Cream, No. 7 & 9.**  
**Lanolin Cream, No. 7.**

**Toothpaste, No. 9 & 10.**  
**Glycerine & Honey Jelly, soothing and emollient, No. 9.**  
**Cucumber & Glycerine, No. 7.**

*Chemists' names may be added to these and any alterations made on taking 3 gross.*

When a **special design** is required we charge for the die at cost price and can supply the most artistic designs in faultless drawing. Seven gross is the smallest quantity that can be printed to a special design.

## COLORING.

The Tubes are supplied in three types of colors, and in any shade required. The following list gives the sizes and colors always in stock:—

### TRANSPARENT BRONZE COLORS.

Green, Nos. 3, 3, 6, 7, 9, 10.  
Red Nos. 9, 10.  
Pink No. 4.  
Blue Green, No. 3.  
Blue No. 9.  
Green with a broad white band,  
Nos. 6, 7, 9.

### ENAMEL COLORS.

White, Nos. 7, 9, 10, and extra size  $5 \times 1\frac{1}{8}$   
White with one transparent red narrow circle, Nos. 3, 7, 9.  
Lavender, Nos. 3, 6, 9, 10, and extra size  $4\frac{1}{2} \times 1$   
Red, Nos. 7, 9, 10  
Yellow, No. 9. Pale Blue, No. 9.  
Pale Pink, Nos. 9, 10.

### DULL BRONZE COLORS.

Silver, Nos. 4, 5, 6, 7, 9, 10.  
Violet, Nos. 7, 9.  
Red, Nos. 7, 9.  
Blue, No. 9.  
Green, Nos. 7, 9.

*All other colors supplied to order.*

# Tube = Filling Machine.

The Cylinder has a capacity of about 2-lb. of material, it is easily removed for filling and cleaning purpose. One spout is supplied with every machine, and spouts of other diameters are supplied at 1/- each. The spouts are interchangeable.

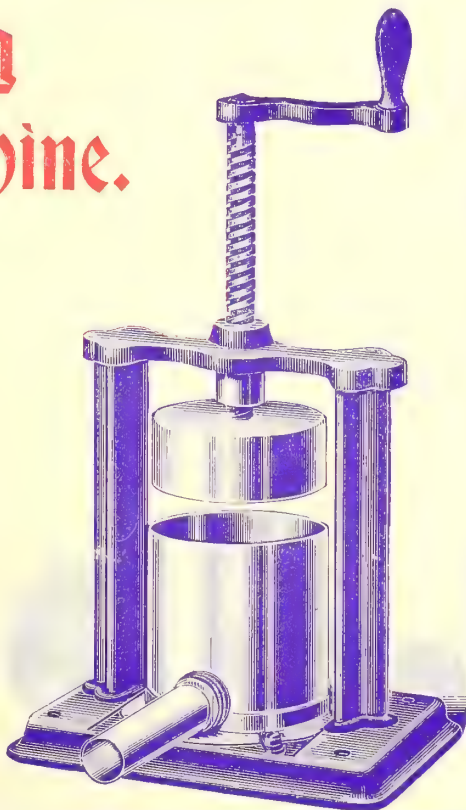
For closing the tubes we recommend our

## CLOSING MACHINE

15/- net, or

PLIERS 3/- net.

LARGE PLIERS 6/- net.



## Prices of Collapsible Tubes.

of PURE TIN, Per Gross.

| No. | Size.         | Approx. Capacity in Avoirdupois Weights. | Plain. | Plain Tubes Printed only | Tubes Coloured Only. | Tubes Coloured and Printed |
|-----|---------------|------------------------------------------|--------|--------------------------|----------------------|----------------------------|
| 0   | 1 1/2 x 1 1/8 | 1 dram.                                  | 2/10   | 4/8                      | 5/-                  | 6/3                        |
| 1   | 1 1/2 x 1 1/8 | 1 1/2                                    | 2/11   | 4/10                     | 5/1                  | 6/4                        |
| 2   | 1 1/2 x 1 1/8 | 2                                        | 3/-    | 5/-                      | 5/4                  | 6/7                        |
| 3   | 1 1/2 x 1 1/8 | 2 1/2                                    | 4/3    | 6/3                      | 6/6                  | 7/10                       |
| 4   | 1 1/2 x 1 1/8 | 3                                        | 4/5    | 6/3                      | 6/8                  | 7/11                       |
| 5   | 1 1/2 x 1 1/8 | 3 1/2                                    | 4/6    | 6/7                      | 6/11                 | 8/2                        |
| 6   | 1 1/2 x 1 1/8 | 4                                        | 5/1    | 6/11                     | 7/3                  | 8/9                        |
| 7   | 1 1/2 x 1 1/8 | 5 1/2 drs.                               | 5/8    | 7/6                      | 7/10                 | 9/1                        |
| 8   | 1 1/2 x 1 1/8 | 5 1/2                                    | 5/10   | 7/9                      | 8/-                  | 9/5                        |
| 9   | 1 1/2 x 1 1/8 | 9                                        | 7/10   | 9/8                      | 10/-                 | 11/3                       |
| 10  | 1 1/2 x 1 1/8 | 10 1/2 oz.                               | 8/2    | 10/-                     | 10/4                 | 11/7                       |
| 11  | 1 1/2 x 1 1/8 | 14 1/2 drs.                              | 10/4   | 12/2                     | 12/6                 | 13/9                       |
| 12  | 1 1/2 x 1 1/8 | 14 1/2                                   | 11/3   | 13/2                     | 13/5                 | 14/8                       |
| 13  | 1 1/2 x 1 1/8 | 2 1/2                                    | 15/11  | 17/10                    | 18/9                 | 20/-                       |
| 14  | 1 1/2 x 1 1/8 | 4 1/2                                    | 41/3   | 43/2                     | 44/1                 | 45/4                       |
| 15  | 1 1/2 x 1 1/8 | 1 1/2                                    | 12/6   | 14/5                     | 15/-                 | 16/-                       |
| 16  | 1 1/2 x 1 1/8 | 2                                        | 18/6   | 21/6                     | 21/-                 | 23/-                       |
| 17  | 1 1/2 x 1 1/8 | 2 1/2                                    | 20/-   | 22/9                     | 22/6                 | 25/6                       |
| 18  | 1 1/2 x 1 1/8 | 2 1/2                                    | 23/-   | 26/-                     | 25/6                 | 28/6                       |
| 19  | 1 1/2 x 1 1/8 | 3                                        | 24/-   | 27/6                     | 27/-                 | 30/-                       |
| 20  | 1 1/2 x 1 1/8 | 4                                        | 29/-   | 32/6                     | 32/-                 | 35/6                       |

Other measurements supplied.

## TUBES OF CHEAPER METAL.

We can supply tubes at much cheaper prices than above quoted and shall be glad to give special quotations on learning size of tube and quantity required.

## WITCH HAZEL.

DISTILLED EXTRACT.

First quality, will keep indefinitely.  
1-lb. net. Gal., 7/- net. 1/- size 9d. doz. subject

## WORM CHOCOLATE.

In a most attractive package, of transparent gelatine, coloured in gold, blue, red, etc. This line commands a ready sale.

## WARREN CAPSULES

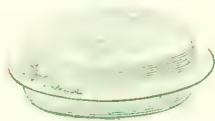
These empty Gelatine Capsules are made from the finest gelatine only.

Special quotations given for quantity and bulk.

HOS. CHRISTY & Co., 4, 10 & 12 Old Swan Lane, Upper Thames St., LONDON, E.C.

"Messrs. Christy & Co. deserve to be congratulated on the manner in which they have brought home to English Chemists the possibilities of the Cachet for promoting elegance in Pharmacy.—  
The Chemist & Druggist.

# Cachets.



## Prices of Cachets (Christy) and Koseals.

ANY SIZE, PLAIN WHITE OR ANY COLOUR, with names of drugs or of complaints printed or embossed, in boxes of 1,000, 500, or 250. 3/- 1,000

With special wording printed or embossed, white or coloured. 3/6 1,000

NO CHARGE FOR DIES.

### SIZES AND CAPACITY.

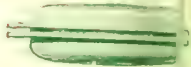
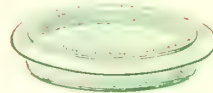
|                        |                          |
|------------------------|--------------------------|
| 000, 1½ grs. Quin.     | 1½, 10½ to 15 grs. Quin. |
| 0, 3 to 4 grs. Quin.   | 2, 15 to 18½ grs. Quin.  |
| 0½, 6 to 7½ grs. Quin. | Or 28 grs. Sulphonal     |
| 1, 9 to 10½ grs. Quin. |                          |



" 'Morstadt' Cachets and Koseals are obtainable in most attractive colours."—The Chemist & Druggist.

# Koseals.

PATENTED



The raised portion on the Koseals serves two purposes. It simplifies the process of moistening and prevents the rims from hardening when closed.

KOSEALS can be securely closed with rims adhering or separate as preferred.

KOSEALS do not crinkle at the edges.

KOSEALS require no special care in moistening.

KOSEALS are swallowed with exceptional ease.

KOSEALS save much time and labour.

"The use of your Koseals saves much time and labour."  
W. L. F. S. Kewen

Another customer writes:—"Patients find Koseals easy to swallow for the reason that when the edges are not stuck together they soften more readily."

## PRICES OF APPARATUS.

|                                    |      |
|------------------------------------|------|
| A, closing 12 of all sizes         | 30/- |
| A, Ditto without 000               | 27/6 |
| B, closing 12 of No. 0, 0½         | 16/- |
| C, closing 12 of No. 000, 1, 1½, 2 | 18/- |
| C, Ditto without 000               | 16/- |
| D, closing 12 of 000               | 12/- |

"SPECIAL" APPARATUS.—For closing 3 of all sizes

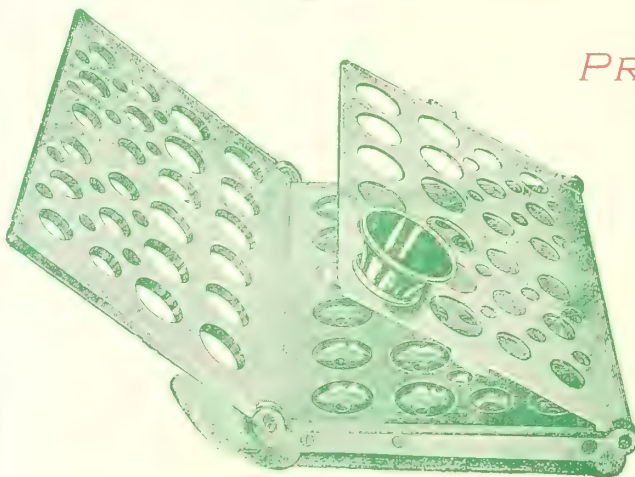
For closing 3 of all sizes except 000

"IDEAL" APPARATUS.—For closing 6 of all sizes

SINGLE APPARATUS.—To close 1 at a time of 0, 0½

To close 1 at a time of 1, 1½, 2

To close 1 at a time of all sizes



# Adeps Lanæ (Christy).



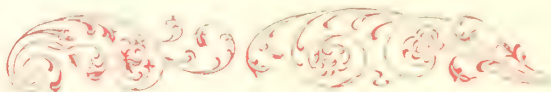
ADEPS LANÆ (Christy) is characterised by remarkable penetrating powers. It does not become rancid and possesses an extremely soothing effect on the skin, rendering it soft and supple.



## ADEPS LANÆ

B.P. 1898.

|           |    |
|-----------|----|
| Hydrous   | at |
| Anhydrous | at |





Contractors to H.M. Government.



*Arthur H. Cox*

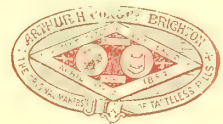


Detailed List of Pills, Pearl and Gelatine Coated, will be sent with Therapeutic Index on demand.

ALL CARRIAGE PAID.

ARTHUR H. COX & Co.  
BRIGHTON.

Telegraphic Address: "COX, BRIGHTON"





| No. |                                 | Price per Gross |       |       |
|-----|---------------------------------|-----------------|-------|-------|
|     |                                 | 10              | 50    | 100   |
|     |                                 | Gross           | Gross | Gross |
| 227 | ACID. ARSENIOSI                 | 6d.             | 5½d.  | 5d.   |
|     | gr. ʒss or ʒi                   |                 |       |       |
| 229 | ACID. ARSENIOSI gr. ʒss         |                 |       |       |
|     | Ferri Sulph. Ex. gr. ij         | 6d.             | 5½d.  | 5d.   |
| 617 | ALOES ET FERRI gr. iv.          |                 |       |       |
|     | Ol. Pulegii q.s.                | 4d.             | 3½d.  | 3d.   |
|     | (Steel and Pennyroyal.)         |                 |       |       |
| 244 | ALOIN gr. ss or j               | 5d.             | 4½d.  | 4d.   |
| 650 | ALOIN                           |                 |       |       |
|     | Ext. Nuc. Vom.                  |                 |       |       |
|     | Ferri Sulph. Ex.                |                 |       |       |
|     | Pulv. Myrrh.                    |                 |       |       |
|     | Saponis aa gr. ss               | 6d.             | 5½d.  | 5d.   |
| 651 | ALOIN                           |                 |       |       |
|     | Ext. Nuc. Vom.                  |                 |       |       |
|     | " Bellad. Vir.                  |                 |       |       |
|     | Ferri Sulph. Ex.                |                 |       |       |
|     | Pulv. Myrrh.                    |                 |       |       |
|     | Saponis aa gr. ss               | 6d.             | 5½d.  | 5d.   |
| 502 | EXT. ANTHEM. gr. j              |                 |       |       |
|     | P. Rhei gr. ij                  |                 |       |       |
|     | Ext. Tarax. gr. j               | 5d.             | 4½d.  | 4d.   |
|     | (Chamomile Pills.)              |                 |       |       |
| A   | PIL. APERIENS                   |                 |       |       |
|     | P. Coloc.                       |                 |       |       |
|     | Pulv. Jalap.                    |                 |       |       |
|     | Calomel                         |                 |       |       |
|     | Ext. Aloes                      |                 |       |       |
|     | Sapo Mollis                     |                 |       |       |
|     | Gingerin                        |                 |       |       |
|     | Cambog.                         |                 |       |       |
|     | Pt. pil. gr. iv or v            | 4d.             | 3½d.  | 3d.   |
|     | Each 4-gr. pill contains        |                 |       |       |
|     | Calomel gr. ʒ.                  |                 |       |       |
| A   | PIL. APERIENS gr. v, with ½ gr. |                 |       |       |
|     | Calomel in each pill            | 4d.             | 3½d.  | 3d.   |
| A   | PIL. APERIENS gr. v, with 1 gr. |                 |       |       |
|     | Calomel in each pill            | 4d.             | 3½d.  | 3d.   |
| A   | PIL. APERIENS gr. iv or v, sine |                 |       |       |
|     | Calomel                         | 4d.             | 3½d.  | 3d.   |
| A   | PIL. APERIENS c. Podoph.        |                 |       |       |
|     | gr. ½ (4-gr. pills)             | 4d.             | 3½d.  | 3d.   |
| 335 | BUTYL-CHLORAL HYDRAT.           |                 |       |       |
|     | gr. ij                          | 1 2             | —     | —     |
|     | gr. ij ss or ij                 | 1 6             | —     | —     |
| 259 | CALX SULPHURATA                 |                 |       |       |
|     | gr. ss, ʒss, ʒi, ʒi ss or ʒi    | 5d.             | 4½d.  | 4d.   |
|     | gr. j, jss or ij                | 6d.             | 5½d.  | 5d.   |
| 18  | CALOMEL                         |                 |       |       |
|     | gr. j                           | 4d.             | 3½d.  | 3d.   |
|     | gr. ij or ij                    | 5d.             | 4½d.  | 4d.   |
|     | gr. iv or v                     | 6d.             | 5½d.  | 5d.   |
| 19  | CALOMEL gr. j                   |                 |       |       |
|     | Pulv. Opil gr. ½                | 8d.             | —     | —     |
| 20  | CALOMEL gr. ij                  |                 |       |       |
|     | Pulv. Opil gr. ½                | 8d.             | —     | —     |
| 522 | EXT. CASCAR. SAG.               |                 |       |       |
|     | gr. j, ij or iij                | 7d.             | 6d.   | 5d.   |
|     | gr. iv                          | —               | 7d.   | 6d.   |

| No. |                             | Price per Gross |       |       |
|-----|-----------------------------|-----------------|-------|-------|
|     |                             | 10              | 50    | 100   |
|     |                             | Gross           | Gross | Gross |
| 700 | EXT. CASCAR. SAG.           |                 |       |       |
|     | Pil. Coloc. Co. aa gr. ijss | 10d.            | —     | —     |
| 193 | PIL. CATHARTIC. FORT.       |                 |       |       |
|     | Pil. Cambog. Co. gr. iv     |                 |       |       |
|     | Hyd. Subchlor. g. j         | 4d.             | 3½d.  | 3d.   |
| 332 | PIL. COCHIAE gr. iv or v    | 4d.             | 3½d.  | 3d.   |
| 770 | EXT. COLOC. CO. gr. iij     |                 |       |       |
|     | " Bellad. Vir.              | gr. ½           |       |       |
|     | " Nuc. Vom.                 | gr. ½           |       |       |
|     | P. Ipecac.                  | gr. ½           |       |       |
|     | Ext. Hyos. Vir.             | gr. j           | 11d.  | —     |
|     | (Pil. Coloc. Co. S. F. H.)  |                 |       |       |
| 769 | EXT. COLOC. CO.             |                 |       |       |
|     | Calomel aa gr. jss          |                 |       |       |
|     | Ext. Hyos. Vir.             | gr. ½           |       |       |
|     | " Nuc. Vom.                 | gr. ½           |       |       |
|     | P. Aloes                    | gr. ½           |       |       |
|     | " Ipecac.                   | gr. ½           | 10d.  | —     |
|     | (Dr. Fordyce Barker's.)     |                 |       |       |
| 42  | EXT. COLOC. CO. gr. iij     |                 |       |       |
|     | Calomel gr. ij              | 1               | 11d.  | 10d.  |
| 41  | EXT. COLOC. CO. gr. iv      |                 |       |       |
|     | Calomel gr. j               | 1               | 11d.  | 10d.  |
| 52  | EXT. COLOC. CO. gr. ijss    |                 |       |       |
|     | Pil. Hydrarg.               | gr. ijss, 10d.  | 9d.   | 8d.   |
| 54  | EXT. COLOC. CO. gr. ij      |                 |       |       |
|     | Pil. Hydrarg.               | gr. j           |       |       |
|     | Ext. Hyos. Vir.             | gr. ij          | 1     | 11d.  |
| 55  | EXT. COLOC. CO. gr. ij      |                 |       |       |
|     | Pil. Hydrarg.               | gr. j           |       |       |
|     | Ext. Hyos. Vir.             | gr. j           | 11d.  | 10d.  |
| 56  | EXT. COLOC. CO. gr. iij     |                 |       |       |
|     | Pil. Hydrarg.               | gr. j           |       |       |
|     | Ext. Hyos. Vir.             | gr. j           | 1     | 11d.  |
| 25  | PIL. COLOC. CO. P.B. gr. iv |                 |       |       |
|     | Calomel gr. j               | 11d.            | 10d.  | 9d.   |
| 28  | PIL. COLOC. CO. gr. ijss    |                 |       |       |
|     | " Hydrarg.                  | gr. ijss        | 8d.   | 7d.   |
| 530 | PIL. COLOC. CO. gr. iv      |                 |       |       |
|     | " Hydrarg.                  | gr. j           | 11d.  | 10d.  |
|     | (Christison.)               |                 |       |       |
| 139 | PIL. COLOC. ET HYOS.        |                 |       |       |
|     | P.B. gr. iv                 |                 |       |       |
|     | Calomel gr. j               | 11d.            | 10d.  | 9d.   |
| 141 | PIL. COLOC. ET HYOS.        |                 |       |       |
|     | P.B. gr. iv                 |                 |       |       |
|     | Podophyllin gr. ½           | 11d.            | 10d.  | 9d.   |
| 144 | PULV. DIGITALIS.            |                 |       |       |
|     | " Scillæ                    |                 |       |       |
|     | Pil. Hydrarg.               |                 |       |       |
|     | Ext. Hyos. Vir. aa gr. j    | 7d.             | 6d.   | 5d.   |
| 473 | PULV. DIGITALIS             |                 |       |       |
|     | " Scillæ                    |                 |       |       |
|     | Pil. Hydrarg. aa gr. j      | 6d.             | —     | —     |
|     | (Guy's or Baly's Pill.)     |                 |       |       |

| No. |                              | Price per Gross |       |       |
|-----|------------------------------|-----------------|-------|-------|
|     |                              | 10              | 50    | 100   |
|     |                              | Gross           | Gross | Gross |
| 375 | EXT. ERGOTÆ P.B.             |                 |       |       |
|     | gr. ss                       | 8d.             |       |       |
|     | gr. j                        | 1               |       |       |
|     | gr. ij                       | 1               |       |       |
|     | gr. iij                      | 2               |       |       |
| 428 | EXT. ERGOTÆ P.B.             |                 |       |       |
|     | Ferri Sulph. Ex.             |                 |       |       |
|     | Ext. Hellebor.               |                 |       |       |
|     | " Aloes Soc. aa gr. j        |                 |       |       |
|     | Ol. Sabin.                   | iii ss          | —     | —     |
| 773 | EXT. ERGOTÆ P.B. gr. ij      |                 |       |       |
|     | Hyd. Perchlor.               | gr. ʒ           |       |       |
|     | Podoph.                      | gr. ʒ           |       |       |
|     | Ext. Aloes Aq.               | gr. ss          |       |       |
|     | " Bellad. Vir.               | gr. ʒ           |       |       |
|     | (Pil. Ergotin. Co. S. F. H.) |                 |       |       |
| 429 | EXT. EUONYMI SICC.           |                 |       |       |
|     | EUONYMIN gr. j               |                 |       |       |
| 430 | EXT. EUONYMI SICC. gr. ij    |                 |       |       |
| 433 | EXT. EUONYMI SICC.           |                 |       |       |
|     | " Coloc. Co. aa gr. j        |                 |       |       |
|     | " Hyos. Vir. gr. ss          | —               |       |       |
| 194 | PIL. FERRI ET ARSEN.         |                 |       |       |
|     | MONCKTON                     |                 |       |       |
|     | P. Acid. Arseniosi gr. iv    |                 |       |       |
|     | Ferri Redact. gr. 144        |                 |       |       |
|     | Sacchari Alb. gr. 100        |                 |       |       |
|     | Pt. pil. 144.                |                 |       |       |
| 284 | FERRI ARSENAS                |                 |       |       |
|     | gr. ʒss, ʒi, ʒi ss           |                 |       |       |
| 404 | PIL. FERRI PHOS. C. QUIN.    |                 |       |       |
|     | C. STRYCH. (EASTON)          |                 |       |       |
|     | P. Ferri Phosph.             | gr. j           |       |       |
|     | Quinine Phosph.              | gr. j           |       |       |
|     | Strychnine Phosph.           | gr. ʒ           |       |       |
| 208 | FERRI REDACT. gr. j or ij.   |                 |       |       |
| 727 | PIL. FERRI P.B. gr. iv       |                 |       |       |
|     | Acid. Arsen.                 | gr. ʒ           |       |       |
| 797 | PIL. FERRI P.B. gr. iv       |                 |       |       |
|     | Acid. Arsen.                 | gr. ʒ           |       |       |
| 787 | PIL. HYDRARG. gr. jss        |                 |       |       |
|     | Ext. Calomel. Ac. L. gr. ss  |                 |       |       |
|     | " Aloes Barb.                |                 |       |       |
|     | " Hyos. Vir. aa gr. j        |                 |       |       |
|     | (Cont. an. 1 Kina-matic.)    |                 |       |       |
| 163 | HYD. C. CRETA gr. j or ss.   |                 |       |       |
| 164 | HYD. C. CRETA gr. j          |                 |       |       |
|     | Pulv. Ipecac. Co. gr. j      |                 |       |       |
| 292 | HYD. IODID. VIR. gr. j       |                 |       |       |
|     | Pulv. Opil gr. ½             |                 |       |       |
| 294 | HYD. PERCHLOR. gr. ʒ         |                 |       |       |
|     | Pulv. Opil gr. ʒ             |                 |       |       |
| 740 | ICHTHYOL                     |                 |       |       |
|     | gr. jss                      |                 |       |       |
|     | gr. j                        |                 |       |       |
|     | gr. ij                       |                 |       |       |
| 82  | PULV. IPECAC. gr. ʒ          |                 |       |       |
|     | Ext. Calomel. Co. gr. ij     |                 |       |       |
|     | Pil. Hydrarg. gr. jss        |                 |       |       |
|     | Ext. Hyos. Vir. gr. j        |                 |       |       |

In cases where more than 10 gross are quoted, 100 gross can be had assorted at the 100 gross rate.

Pills can be had GELATINE Coated at a slightly increased cost.



THE ORIGINAL PATENT OF PATENTLESS PILLS

DOX'S PATENTLESS PILLS

| Price per Gross.<br>10 50 100<br>Gross. Gross. Gross. |                                            |  | Price per Gross.<br>10 50 100<br>Gross. Gross. Gross. |                                           |               | No.                      | Price per Gross.<br>10 50 100<br>Gross. Gross. Gross. |          |          |
|-------------------------------------------------------|--------------------------------------------|--|-------------------------------------------------------|-------------------------------------------|---------------|--------------------------|-------------------------------------------------------|----------|----------|
| 3 PIL. IPECAC.                                        |                                            |  | 219 PIL. PHOSPHORI Co.                                |                                           |               | 96 PIL. PRANDII          |                                                       |          |          |
| Scilla                                                | aa gr. $\frac{3}{4}$                       |  | R-Phosphori                                           | gr. $\frac{1}{10}$                        |               | R Pulv. Rhei             | gr. j                                                 |          |          |
| Capsici                                               | aa gr. $\frac{1}{2}$                       |  | Ferri Rodact.                                         | gr. iij                                   |               | Aloes Soc.               | gr. j                                                 |          |          |
| Opii                                                  | aa gr. $\frac{1}{2}$                       |  | Quinina Sulph.                                        | gr. ss                                    |               | Saponis                  | gr. ss                                                |          |          |
| Gum. Ammon.                                           |                                            |  | Strychnina                                            | gr. $\frac{1}{10}$                        | 1/6           | Capsici                  | gr. ss                                                |          |          |
| Ext. Conil                                            | aa gr. j, 1/                               |  |                                                       |                                           |               | Ext. Gent.               | gr. j                                                 | 5d.      | 4½d. 4d. |
| 7 MRPH. ACET.                                         | $\frac{1}{2}$ ..... 1/                     |  | 221 PHOSPHORI                                         | gr. $\frac{1}{10}$                        |               | (Digestive Pills.)       |                                                       |          |          |
| 51 MRPH. ACET.                                        | ss ..... 1/8                               |  | Quinina Sulph.                                        | gr. j                                     | 1 6           | 781 PIL. PRANDII PARV.   |                                                       |          |          |
| 7 MRPH. HYDROCH.                                      | gr. $\frac{1}{2}$ , 1/                     |  | 93 PODOPHYLLIN                                        | gr. $\frac{1}{2}$ ss or $\frac{1}{2}$ 6d. |               | R Ext. Nuc. Vom.         | gr. $\frac{1}{2}$                                     |          |          |
| 0 MRPH. HYDROCH.                                      | gr. ss, 1/8                                |  | 49 PODOPHYLLIN                                        | gr. $\frac{1}{2}$                         |               | Sodae Carb.              | Ex. gr. j                                             |          |          |
| 8 Ex. NUC. VOM.                                       | gr. $\frac{1}{4}$ or ss, 7d.               |  | Ext. Coloc. Co.                                       | gr. iij                                   |               | Ext. Gent.               |                                                       |          |          |
| 8 PIL. OPII                                           |                                            |  | " Hyos. Vir.                                          | gr. j                                     | 11d. 10d. 9d. | P. Zingib.               | aa gr. ss                                             |          |          |
| $\frac{1}{2}$ ..... 7d.                               |                                            |  | 494 PODOPHYLLIN                                       | gr. $\frac{1}{2}$                         |               | " Capsici                | gr. $\frac{1}{2}$                                     | 4d.      | 3½d. 3d. |
| ss or $\frac{1}{2}$ ..... 8d.                         |                                            |  | Ext. Hyos. Vir.                                       | gr. $\frac{1}{2}$                         |               | 99 QUININÆ SULPH.        | gr. j                                                 |          |          |
| 9 PIL. OPII gr. j                                     | 9d.                                        |  | " Tarax.                                              | gr. iij                                   |               | 101 QUININÆ SULPH.       | gr. iij                                               |          |          |
| 4 PAIN (FINKLER)                                      |                                            |  | P. Pil. Rhei Co.                                      | gr. iij                                   | 11d.          | 177 QUININÆ SULPH.       |                                                       |          |          |
| $\frac{1}{2}$ ..... 2/9                               |                                            |  | 176 PODOPHYLLIN                                       | gr. $\frac{1}{2}$                         |               | Ferri Sulph. Ex.         | aa gr. j                                              |          |          |
| ij ..... 4/6                                          |                                            |  | Pil. Rhei Co. P.B.                                    | gr. iij                                   |               | 107 PIL. RHEI Co.        | gr. ijss                                              |          |          |
| ij ..... 6/                                           |                                            |  | Ext. Hyos. Vir.                                       | gr. j                                     | 11d.          | " Hydrarg.               | gr. ijss                                              | 5d.      | 4½d. 4d. |
| 0 PESIN PORCI P.B. 1898                               |                                            |  | 498 POT. PERMANG.                                     | gr. j                                     | 6d.           | 501 PIL. RHEI Co.        | gr. iv                                                |          |          |
| ij ..... 1/10                                         |                                            |  | 449 PIL. PRANDII                                      |                                           |               | Ol. Ricini               | q.s.                                                  | 4d.      | 3½d. 3d. |
| 4 PHSPH. PUR.                                         | gr. $\frac{1}{10}$ or $\frac{1}{20}$ , 1/3 |  | R-Ext. Aloes                                          |                                           |               | (Castor Oil Pills.)      |                                                       |          |          |
| 5 PHSPH. PUR.                                         | gr. $\frac{1}{16}$ or $\frac{1}{24}$ , 1/8 |  | Pil. Rhei Co. aa gr. j                                |                                           |               | 190 PIL. SCILLÆ Co. P.B. |                                                       |          |          |
| 0 PHSPHORI                                            | gr. $\frac{1}{100}$ ..... 1/3              |  | Ext. Gentian.                                         | gr. ij                                    | 5d. 4½d. 4d.  | gr. ijss                 |                                                       |          |          |
| 9 PHSPHORI                                            | gr. $\frac{1}{50}$                         |  | 450 PIL. PRANDII                                      |                                           |               | Morph. Acet.             | gr. $\frac{1}{10}$                                    |          |          |
| Ex Damiana                                            | gr. ij                                     |  | R-Ext. Aloes Aq. gr. j                                |                                           |               | Pulv. Ipecac.            | gr. ss                                                |          |          |
| Nuc. Vom.                                             | gr. $\frac{1}{8}$ ..... 1/6                |  | " Gentian.                                            | gr. ij                                    |               | Camphor                  | gr. j                                                 | 8d.      |          |
|                                                       |                                            |  | " Anthem.                                             | gr. j                                     |               | 319 EXT. TARAX.          |                                                       |          |          |
|                                                       |                                            |  | Pulv. Capsici                                         | gr. $\frac{1}{2}$                         | 5d. 1½d. 4d.  | Pil. Rhei Co. aa gr. ij  | 4d.                                                   | 3½d. 3d. |          |
|                                                       |                                            |  |                                                       |                                           |               | (Dandelion Pills.)       |                                                       |          |          |
|                                                       |                                            |  |                                                       |                                           |               | 120 ZINCI VALER.         | gr. ij                                                | 9d.      |          |

## LITTLE PILL SERIES.

| Price per Gross.<br>10 50 100<br>Gross. Gross. Gross. |                    |              | No.                       | Price per Gross.<br>10 50 100<br>Gross. Gross. Gross. |              |  |
|-------------------------------------------------------|--------------------|--------------|---------------------------|-------------------------------------------------------|--------------|--|
| 7 LITTLE ANTIBILIOUS PILLS                            |                    |              | 763 LITTLE CASCARIN PILLS |                                                       |              |  |
| Jalapin                                               | gr. $\frac{1}{16}$ |              | Aloin                     |                                                       |              |  |
| Ain                                                   | gr. $\frac{1}{16}$ |              | Cascarin                  |                                                       |              |  |
| Intandrin                                             | gr. $\frac{1}{16}$ |              | Podophyllin               | aa gr. $\frac{1}{4}$                                  | 6d. 5½d. 5d. |  |
| Eloph.                                                | gr. $\frac{1}{16}$ |              | (Constipation.)           |                                                       |              |  |
| Elophog.                                              | gr. $\frac{1}{16}$ |              | 776 LITTLE COUGH PILLS    |                                                       |              |  |
| E. Hyos. Vir.                                         | gr. $\frac{1}{16}$ |              | Morph. Hydroch.           | gr. $\frac{1}{16}$                                    |              |  |
| Or Res. Cap.                                          | q.s.               | 4d. 3½d. 3d. | P. Scilla                 |                                                       |              |  |
|                                                       |                    |              | " Ipecac.                 | aa gr. $\frac{1}{16}$                                 | 4d. 3½d. 3d. |  |
|                                                       |                    |              | Bals. Tolu                | gr. $\frac{1}{16}$                                    |              |  |
|                                                       |                    |              | 698 LITTLE LIVER PILLS    |                                                       |              |  |
|                                                       |                    |              | Aloin                     | gr. $\frac{1}{16}$                                    |              |  |
|                                                       |                    |              | Podophyllin               | gr. $\frac{1}{16}$                                    |              |  |
|                                                       |                    |              | Ext. Hyos. Vir.           | gr. $\frac{1}{16}$                                    |              |  |
|                                                       |                    |              | Jalapin                   | gr. $\frac{1}{16}$                                    |              |  |
|                                                       |                    |              | Ext. Nuc. Vom.            | gr. $\frac{1}{16}$                                    |              |  |
|                                                       |                    |              | Ol. Res. Capsici          | q.s.                                                  | 4d. 3½d. 3d. |  |

## OFFICIAL FORMULÆ.

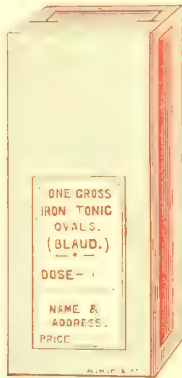
| Price per Gross.<br>10 50 100<br>Gross. Gross. Gross. |  |  | No.                           | Price per Gross.<br>10 50 100<br>Gross. Gross. Gross. |  |  |
|-------------------------------------------------------|--|--|-------------------------------|-------------------------------------------------------|--|--|
| 6 PIL. ALOES BARB. P.B.                               |  |  | 71 PIL. HYDRARG. P.B.         |                                                       |  |  |
| 8 PIL. ALOES. ET ASAF. P.B.                           |  |  | 92 PIL. HYD. SUBCHL. Co. P.B. |                                                       |  |  |
| 21 PIL. ALOES ET FERRI P.B.                           |  |  | 104 PIL. RHEI Co. P.B.        |                                                       |  |  |
| 11 PIL. ALOES ET MYRRH. P.B.                          |  |  | 115 PIL. SCILLÆ Co. P.B.      |                                                       |  |  |
| 24 PIL. COLOC. Co. P.B.                               |  |  | 436 PIL. FERRI (BLAUD)        |                                                       |  |  |
| 30 PIL. COLOC. ET HYOS. P.B.                          |  |  |                               |                                                       |  |  |
| 22 PIL. GALBANI Co. P.B.                              |  |  |                               |                                                       |  |  |

\* These cannot be supplied as part of a 50 or 100 Gross assorted order.

In ordering Pills from this List, kindly give the numbers in the left-hand column; where a number includes several strengths, it is also necessary to indicate the strength required.  
Pills can be had GELATINE Coated at a slightly increased cost.

# COX'S PACKED PROPRIETARY PILLS

Name and Address on  $\frac{1}{2}$  gross lots, or 4 x 3 dozen assorted.



## Blaud Pills. (Formula 436.)

White square bottle, containing 1 gross Iron Tonic Pills (Blaud), in colored carton, labelled for retail use, with Chemist's name and address, also price as required.

Pink or white, 36/ gross.

Gelatine Coated at a slightly increased cost.



## Blaud Pills. (Formula 436.)

1 gross in metal-capped bottle, labelled for retail use.

3 doz. at 3/6 doz.; 6 doz. at 3/3; 12 doz. at 3/.

## Pink Pills. (Formula 436.)

1 gross in metal-capped bottle, labelled for retail use.

3 doz. at 3/6 doz.; 6 doz. at 3/3; 12 doz. at 3/.



Canister containing 1 gross, 30/ gross.

"The style is very effective." C. & D. Sept. 23rd, 1899.

We cannot print name on these canisters.



## Antibilious Pills. (Formula A)

2 doz. in turned wood box, labelled with dose and wrapped.

2/ doz.; 20/ gross.

## Female Pills. (Formula 617.)

2 doz. in turned wood box, labelled with dose and wrapped.

2/ doz.; 20/ gross.

## Gout & Rheumatic Pills. (Formula 787.)

2 doz. in turned wood box, coated or uncoated, labelled with dose and wrapped.

2/4 doz.; 24/ gross.



Metal-capped tube, artistic retail label

## Anti-Corpulency Pills. (Formula 437.)

## Female Pills. (Formula 617.)

## Neuralgia Pills. (Formula 177.)

## Phosphorus and Damiana & Pills

(Formula 729 or 132.)

6d. size, 18 Pills, 24/ gross; 2/2 s.

1/ " 40 " 36/ " 3/3



Metal-capped tube, neatly printed retail label

## Little Liver Pills. (Formula 6)

## Little Cough Pills. (Formula 177.)

## Little Antibilious Pills. (Formula 787.)

## Little Nerve Pills. (Formula 787.)

6d. size, 40 Pills, 26/ gross; 2/4 s.

1/ " 100 " 50/ " 4/4

# PACKED OVALS.

We have in stock the following Ovals, packed for retail use.

## Iron Tonic Ovals, Pink or White. (Formula O 436.)

1 gross in bottle, colored carton, 48/ gross.

## Aperient Ovals, Lavender. (Formula O 1.) 28/ gross; 2/6 doz.

## Blood Purifying Ovals, Orange. (Formula O 2.) 28/ gross; 2/6 doz.

## Digestive Ovals, Lemon. (Formula O 3.) 28/ gross; 2/6 doz.

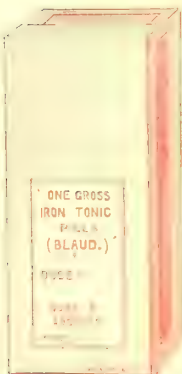
## Iron & Pennyroyal Ovals, Red. (Formula O 619.) 28/ gross; 2/6 doz.

## Iron Tonic Ovals, Pink. (Formula O 436.) 28/ gross; 2/6 doz.

## Gout & Rheumatic Ovals, Violet. (Formula O 787.) 34/ gross; 3/ doz.

## Tonic Ovals, Green. (Formula O 4.) 34/ gross; 3/ doz.

## Easton's Syrup Ovals, Blue. (Formula O 404.) 40/ gross; 3/6 doz.



In bottle

Artistic

These Pills can be had TINTED GELATINE Coated at a slightly increased cost.

SEND FOR OUR SPECIAL OFFER OF 3 GROSS LOTS OF "PACKED PILLS."

Show Cards in Silver and Colors.

With any of our "packed" series (Oval or Round Pills) Show Cards printed with price, without extra charge.





Season 1900.

**"Red  
Cross,"**

AND OTHER

**SPECIALITIES.**

**Carbolic Powder  
and Acid,**

**CHLORIDE OF LIME,**

(Bleaching Powder,)

"Spongwick"

**SULPHUR CANDLES,**

"Zyaper" & "Fema,"

**Sanitary Towels,**

"Red Cross"

**Sanitary Paper,**

"Gerrard's"

**MUSTARD**

**PLASTERS.**



**CUXSON,**

**The "Red Cross"**  
Telegrams "Dressings, Oldbury."  
Telephone No. 55

**GERRARD**  
MANUFACTURERS OF

**& CO.,**  
Specialities,  
**OLDBURY.**



**Tooth Powder,  
Cleansing Ammonia**

**Fuller's Earth,  
Violet Powder,**

"Red Cross"

**Ribbon Plasters,**

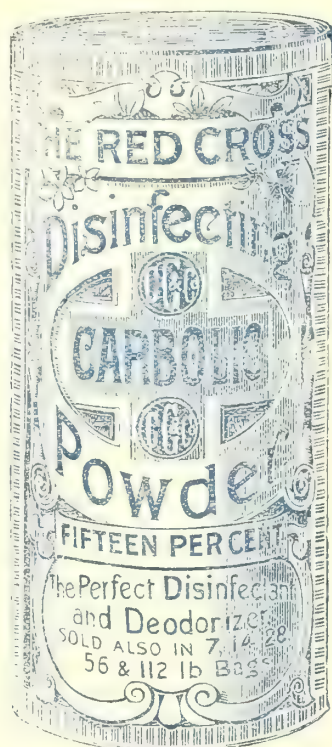
&c., &c.

Orders of £3  
value,  
assorted or  
otherwise, Carriage  
Paid.

**Send for Samples.**

**Special Quotations  
for Contracts.**





# CARBOLIC POWDER.

(15<sup>0</sup> 0)

IN TINS (as illustrated) DREDGER TOP.

Highly enamelled in 3 Colours.

|                           | Per Doz. | Per Gross. |
|---------------------------|----------|------------|
| 6d. Size, containing 1lb. | 3 6      | 36/-       |
| 1 1/2 " " " 2lb.          | 4 6      | 48/-       |

Ditto with Varnished Labels.

|                           |     |      |
|---------------------------|-----|------|
| 6d. Size, containing 1lb. | 3/- | 30/- |
| 1 1/2 " " " 2lb.          | 4/- | 42/- |

IN CARDBOARD CASES.

|                                 |     |      |
|---------------------------------|-----|------|
| 6d. Size, containing 1 1/2 lbs. | 2 6 | 24/- |
| 1 1/2 " " " 3 1/2 lbs.          | 4 6 | 48/- |

(Packed in Wooden Cases of 3 doz. 6d & 1 1/2 doz. 1/- size)

IN BULK (Bags Free).

1/2 cwt. 3 6 per Bag. 1 cwt. 6s. per Bag. 5 cwt. 5 6 per cwt.  
1 Ton, £5.

Carriage paid on Orders of £3.

1d. Packets (containing 6ozs.) Packed in Wooden Cases of 6 dozen.  
Per Gross 8/-; 5 gross Lots, 7 6 gross. 10 gross Lots, 7/- gross.

## CHLORIDE OF LIME

IN WAX-LINED PACKETS

Put up in 1d Packets and packed in WOODEN CASES of 6 dozen.

|                |            |     |
|----------------|------------|-----|
| Single Grosses | per gross, | 8/- |
| 5 gross lots   | "          | 7 6 |
| 10 " "         | "          | 7/- |

|                   | PER DOZ. | PER GROSS. |
|-------------------|----------|------------|
| 1 1/2 lb. packets | 1 6      | 15/-       |
| 1 lb. " "         | 3 -      | 25/-       |

IN BULK.

|                     |          |      |
|---------------------|----------|------|
| 14 and 28lb Jars    | per cwt. | 11/- |
| 56 and 112lb. Casks | "        | 10/- |
| 5 cwt. Casks        | "        | 9/-  |

Jars, Tins and Casks Charged, but credited if returned.

THE BEST GET-UP ON THE MARKET.

"RED  
CROSS"  
BRAND.





## CARBOLIC ACID BOTTLES.

Containing 8 and 16oz.  
Retail at 6d. „ 1/-  
Per doz. 4/- „ 7/6

Attractively put up in Cartons and neatly Labelled.

CUSTOMERS NAMES PRINTED ON GROSS LOTS FREE OF CHARGE

TINS (in Bulk).

Pale Amber, 95%

Gallon 3/3. 5 Gallons 2/6 per Gallon.

Dark for Disinfecting.

1 Gallon Tins, 2/9 per Gallon.



## RED SEAL BENZINE (PURE),

Highly Rectified.

A Powerful CLEANSER and SOLVENT.

Pure Coal Tar Benzine.

|                   |          |           |
|-------------------|----------|-----------|
|                   | Per Doz. | Per Gross |
| Bottles, 3d. size | 2/3      | —         |
| „ 6d. „           | 3/-      | 30/-      |

## Glycerine Camphor Ice

1d. size per gross, 8/-  
2d. „ „ 16/-  
Attractively Labelled & packed in Outers containing 1/2 gross 1d. size and 1/2 gross 2d. size.



## Ammonia (Cleansing)

FULL STRENGTH,

WELL PACKED IN GOOD

CHEMISTS' STYLE.

put in bottles fitted with India rubber corks, and attractively labelled, as per illustration, at the following prices:—

|                  |     |      |      |
|------------------|-----|------|------|
| Capacity, ounces | ... | 10   | 20   |
| Per doz.         | ... | 4/-  | 7/-  |
| Per gross        | ... | 45/- | 78/- |

WARRANTED FULL STRENGTH.



## Carbolic Tooth Powder.

Delicately Perfumed & Warranted Pure

|          |          |          |
|----------|----------|----------|
|          | Per Doz. | Per Gro. |
| 6d. Tins | 2/9      | 30/-     |
| 1/- „    | 4/6      | 48/-     |

Also put up in 1 1/2 Bottles Square Nickel Screw Cap containing 2oz. (in boxes of 1 doz.).

|          |           |
|----------|-----------|
| Per Doz. | Per Gross |
| 4/6      | 48/-      |



Show Cases containing one each of Carbolic, Quinine, Rose Odonto, and Camphorated Dentifrice, for Show on Counter, free with orders of 6 doz.

Customers Names free on orders of 6 doz.

## Glycerine and

### Cucumber.

valuable for the Toilet.

|          |            |
|----------|------------|
| Per doz. | Per gross. |
| 3/-      | 30/-       |
| 4/6      | 48/-       |



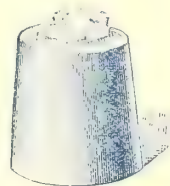
## Cucumber Paste (For making above).

In 1/2 and 1lb. Jars, 2/6 and 3/6 each.  
An emulsified compound of Cucumber Extract, Almond Oil, Fresh Lard, and Glycerine.

## Glycerine (Guaranteed Pure).

|          |            |
|----------|------------|
| Per Doz. | Per Gross. |
| 3/6      | 36/-       |

## Sulphur Fumigators.



THE "SPONGWICK" CANDLES

THE "SPONGWICK CONE.

With improved Patent Sponge Wick, which never fails to ignite.

Four in a Box  
4/- per doz. boxes

In two sizes—1/2lb and 1lb.  
Per doz. - 2/6 and 3/6 net.

These Candles constitute the most perfect System of Disinfecting the Atmosphere and Destroying the Contagion of Disease.

CUSTOMERS NAMES PRINTED ON GROSS LOTS FREE

## RED CROSS

RIBBON



PLASTER

ANTISEPTIC RUBBER ADHESIVE,  
ON STRONG COTTON CLOTH.

ON SPOOLS—Containing 10 yds.

1 1/2 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

9 6 12 13 6 15 6 20 23 6 30/- per doz.

IN ONE YARD TINS—

Plain or Porous, 7 1/2 in. wide, 1/- per yard.



SANITARY  
PAPER—  
ANTISEPTIC

Specially  
Made  
Soluble  
Paper.

Put up in a strong case, suitable for hanging, containing  
600 sheets Pure Vegetable Paper,  
Per Doz. Cases,  
Super Quality, ,, 7/6 ... 2nd quality ,, 6/6

## MUSTARD PLASTERS.

Fig. 1



Fig. 2



MADE WITH PURE MUSTARD.

### ON PAPER.

|                                              | Per 100  | Per 1000 |
|----------------------------------------------|----------|----------|
| 1 Leaf, in Envelope (Boxes of 100), as Fig 1 | ..       | 38/-     |
| 3 Leaves, in Envelope                        | per doz. | 1 9      |
| 6 ..                                         | ..       | 5 6      |
| 3 .. in Tin Box, as Fig 2                    | ..       | 2 3      |
| 6 ..                                         | ..       | 4/-      |
| 10 .. in Flat Tin Box                        | ..       | 5 6      |
| 1 yard Rolls, 6 in. wide, as Fig 2.          | ..       | 8/-      |

### ON CLOTH.

|                                              | Per 100  | Per 1000 |
|----------------------------------------------|----------|----------|
| 1 Leaf, in Envelope (Boxes of 100), as Fig 1 | ..       | 44/-     |
| 3 Leaves, in Envelope                        | per doz. | 2 1      |
| 6 ..                                         | ..       | 1 1      |
| 3 .. in Tin Box, as Fig 2                    | ..       | 2 6      |
| 6 ..                                         | ..       | 4 6      |
| 10 .. in Flat Tin Box                        | ..       | 6/-      |
| 1 yard Rolls, 6 in. wide, as Fig 2           | ..       | 8 6      |

Customers Names printed Free on orders for  
1,000 Leaves in Envelopes

## SANITARY TOWELS.

Prov. Pat. No. 1580.



THE  
'ZYAPER'  
(REGD)  
OLD  
FASHIONED  
STYLE

Which for Durability, and Ease of Adjustment  
stands Unrivalled. Comfortable and  
thoroughly Absorbent.

We are especially desirous of bringing this article  
to the notice of our friends, as we are convinced that  
one trial will ensure Repeat Orders

PRICES PER GROSS.

|              | Nos. 1 | 2    | 3    |
|--------------|--------|------|------|
| THE "ZYAPER" | 9/-    | 14/- | 18/- |



The  
'Fema'

This is a Towel of the usual every-day pattern, put  
up in a less expensive form than the "ZYAPER,"  
but is really also a First-Class Article.

PRICES PER GROSS.

|            | Nos. 0 | 1   | 2    | 3    |
|------------|--------|-----|------|------|
| THE "FEMA" | 5/-    | 8/- | 12/- | 15/- |

Put up in Packets containing one dozen with the  
Necessary Attachments

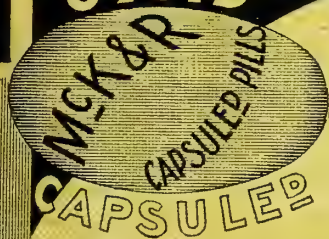
Every description of Druggists' Sundries, Surgical Dressings, &c.,  
CUXSON, GERRARD & CO., OLDBURY.



# McK & R PILLS



**OVOID**



McK. & R. Capsuled Pills are made from the purest materials, and in strict accordance with the British Pharmacopœia, 1898, and other standard authorities.

They are homogeneous in character, and readily soluble. They retain their solubility indefinitely. They are completely covered with gelatine; special machinery having been designed to avoid the unsightly needle holes. This insures perfect protection from atmospheric influences.

The McK. & R. Ovoid Capsuled Pills, in bottles, will keep remarkably well even in warm and damp tropical climates

*Coated With  
Pure Gelatine  
Only*

## McKESSON & ROBBINS

Manufacturing Chemists New York U.S.A.  
LONDON AGTS S. MAWSON & THOMPSON  
7 TO 12 ALDERSGATE STREET E.C.

**NOTE REDUCTION IN PRICES.**



# "McK. & R." CAPSULE PILLS.

According to Formulas of the British Pharmacopœia and other Standard Authorities

| DOZEN BOTTLES CONTAINING                                                         | 25<br>PILLS. | 100<br>PILLS. | DOZEN BOTTLES CONTAINING                                                                                               | 25<br>PILLS. | 100<br>PILLS. |
|----------------------------------------------------------------------------------|--------------|---------------|------------------------------------------------------------------------------------------------------------------------|--------------|---------------|
| <b>ACONITINE CRYSTALS, DUQUESNEL, 1-500 gr.</b>                                  | 5/6          | 18/           | <b>CAMPHOR AND HYOSCYAMUS.</b>                                                                                         | 4/6          | 14            |
| <b>ALOES, BARB., B. P., 4 grs.</b>                                               | 4/           | 12/           | { Camphora, Ext. Hyoscyami, aa, 1 gr. }                                                                                |              |               |
| <b>ALOES, DILUTE (Dr. Hall Dinner Pill), 4 grs.</b>                              | 4/           | 12/           | <b>CAMPHOR, MONO-BROMATED, 2 grs.</b>                                                                                  | 9/           | 32/           |
| { Aloes Barb., Pulv. Ext. Glycyrrh., }<br>{ Saponis Pulv., Theriaca, aa, 1 gr. } |              |               | <b>CANNABIS INDICA EXTRACT, 1-4 gr.</b>                                                                                | 1/6          | 14/           |
| <b>ALOES, SOCOTRINE, B. P., 4 grs.</b>                                           | 4/           | 12/           | <b>CANNABIS INDICA EXTRACT, 1-2 gr.</b>                                                                                | 6/6          | 22/           |
| <b>ALOES AND ASAFETIDA, B. P., 4 grs.</b>                                        | 3/6          | 10/           | <b>CAPSICUM AND HYOSCYAMUS (Anti-Craue.)</b>                                                                           | 6/           | 20/           |
| <b>ALOES AND IRON, B. P., 4 grs.</b>                                             | 4/           | 12/           | { Capsici Pulv., 1 1-2 grs. }                                                                                          |              |               |
| <b>ALOES AND MYRRH, B. P., 4 grs.</b>                                            | 5/           | 16            | { Ext. Hyoscyami, 2 1-2 grs. }                                                                                         |              |               |
| <b>ALOES AND NUX VOMICA.</b>                                                     | 5/           | 16/           | <b>CASCARA SAGRADA EXTRACT, 3 grs.</b>                                                                                 | 6/           | 20/           |
| { Pulv. Aloes Soc., 1 1-2 grs. Ext. Nucis Vom., 1-2 gr. }                        |              |               | <b>CATHARTIC COMPOUND, U. S. P., (Purgative.</b>                                                                       | 4/           | 12/           |
| <b>ALOIN, 1-10, 1-4 gr.</b>                                                      | 3/6          | 10/           | { Ext. Jalapae pulv., Ext. Coloc. Co. pulv., 1 1-3 grs. }                                                              |              |               |
| <b>ALOIN, 1-2 gr.</b>                                                            | 4/8          | 14/           | { Hyd. Subchlor., aa, 1 gr. Cambogiae pulv., 1-4 gr. }                                                                 |              |               |
| <b>ALOIN, 1 gr.</b>                                                              | 7/           | 24/           | <b>CODEINE, 1-2 gr</b>                                                                                                 | 20/          | 75/           |
| <b>ALOIN COMPOUND.</b>                                                           | 4/           | 12/           | <b>COLOCYNTH COMP., B. P., 4 grs.</b>                                                                                  | 7/           | 24            |
| { Aloin, 1-8 gr. }                                                               |              |               | <b>COLOCYNTH COMP. AND BLUE MASS, 5 grs.</b>                                                                           | 6/           | 20            |
| { Ext. Belladonnae, 1-4 gr. }                                                    |              |               | { Pil. Coloc. Comp., B. P., 3 grs. }                                                                                   |              |               |
| { Podophyllin, 1-8 gr. }                                                         |              |               | { Massa Hydrarg., 2 grs. }                                                                                             |              |               |
| <b>ALOIN AND STRYCHNINE.</b>                                                     | 5/6          | 18/           | <b>COLOCYNTH COMP. AND CALOMEL, 5 grs.</b>                                                                             | 6/           | 20            |
| { Aloin, 1-5 gr. Strychnina, 1-60 gr. }                                          |              |               | { Ext. Coloc. Co., 4 grs. }                                                                                            |              |               |
| <b>ALOIN, STRYCHNINE AND BELLADONNA.</b>                                         | 5/           | 16/           | { Hyd. Subchlor., 1 gr. }                                                                                              |              |               |
| { Aloin, 1-5 gr. Strychnina, 1-60 gr. }                                          |              |               | <b>COLOCYNTH AND HYOSCYAMUS, B. P., 4 grs.</b>                                                                         | 6/6          | 22/           |
| { Ext. Belladonnae, 1-8 gr. }                                                    |              |               | <b>COLOCYNTH COMP. EXT., B. P., 5 grs.</b>                                                                             | 6/6          | 22/           |
| <b>ALOIN OR APERIENT, No. 1.</b>                                                 | 7/6          | 25            | <b>CONIUM COMP., B. P., 1885. 5 grs.</b>                                                                               | 5/           | 16/           |
| { Aloin, Ext. Nucis Vom., }                                                      |              |               | <b>COPAIBA COMPOUND.</b>                                                                                               | 5/6          | 18/           |
| { Ferri Sulph., Saponis pulv., }                                                 |              |               | { Cubebe pulv., 2 grs. }                                                                                               |              |               |
| { Myrrhæ pulv., aa, 1-2 gr. }                                                    |              |               | { Massa Copaiabæ, 1 gr. }                                                                                              |              |               |
| <b>ALOIN OR APERIENT, No. 2.</b>                                                 | 6/           | 20            | { Ferri Sulph. Exsic., 1-2 gr. }                                                                                       |              |               |
| { Aloin, Ext. Nucis Vom., }                                                      |              |               | { Terebinth. Venet., 1 1-2 grs. }                                                                                      |              |               |
| { Ferri Sulph., Saponis pulv., }                                                 |              |               | <b>COPAIBA AND OLEO-RESIN CUBEBS, 5 grs.</b>                                                                           | 11/          | 40/           |
| { Myrrhæ pulv., aa, 1-8 gr. }                                                    |              |               | { Pil. Copaiabæ, 3 grs. }                                                                                              |              |               |
| <b>ALOIN OR APERIENT, No. 3.</b>                                                 | 6/           | 20            | { Oleo-resina Cubebe, 2 grs. }                                                                                         |              |               |
| { Aloin, Ext. Nucis Vom., }                                                      |              |               | <b>CORROSIVE SUBLIMATE, 1-30, 1-20, 1-10 gr</b>                                                                        | 3/6          | 10/           |
| { Ferri Sulph., Myrrhæ pulv., }                                                  |              |               | <b>CROTON CHLORAL, 1 gr</b>                                                                                            | 10/          | 36/           |
| { Saponis pulv., Ipecac. pulv., aa, 1-8 gr. }                                    |              |               | <b>CROTON CHLORAL, 2 grs.</b>                                                                                          | 17/          | 64/           |
| <b>ALOIN OR APERIENT, No. 4.</b>                                                 | 6/           | 20/           | <b>CROTON OIL, 1-2 gr</b>                                                                                              | 9/           | 32/           |
| { Aloin, Ext. Nucis Vom., }                                                      |              |               | <b>CUBEBS, OLEO-RESIN, WITH SODA.</b>                                                                                  | 7/           | 24/           |
| { Ferri Sulph., Myrrhæ pulv., }                                                  |              |               | { Oleo-Resina Cubebe, 1 gr. Sodii Bicarb., 1-8 gr. }                                                                   |              |               |
| { Saponis pulv., Ext. Bellad., aa, 1-8 gr. }                                     |              |               | <b>DIGITALIN, 1-60 gr</b>                                                                                              | 5/           | 16/           |
| <b>ANTI-CHOLERA.</b>                                                             | 6/           | 20/           | <b>DIURETIC OR BUCHU.</b>                                                                                              | 5/6          | 18/           |
| { Pulv. Capsici, Asafetida, }                                                    |              |               | { Ext. Buchu, Potassii Nitras, 1 gr. }                                                                                 |              |               |
| { Pulv. Pip. Nig., Camphora, aa, 1-8 gr. }                                       |              |               | { Scillæ pulv., 1-2 gr. }                                                                                              |              |               |
| { Pulv. Opii, 1-12 gr. }                                                         |              |               | <b>ECLECTIC OR PODOPHYLLIN.</b>                                                                                        | 6/           | 20/           |
| <b>ANTI-DYSPEPSIA (FOTHERGILL).</b>                                              | 6/           | 20/           | { Res. Podophylli, 1-8 gr. }                                                                                           |              |               |
| { Strychnina, 1-20 gr. }                                                         |              |               | { Res. Leptand., Res. Juglandis, aa, 1-16 gr. }                                                                        |              |               |
| { Pulv. Ipecac., 2-3 gr. }                                                       |              |               | { Res. Cinielii, 1-32 gr. Ol. Capsici, — }                                                                             |              |               |
| { Pulv. Piper. Nig., 1 1-2 grs. }                                                |              |               | <b>ELATERIN, 1-20 gr</b>                                                                                               | 13/          | 48/           |
| { Ext. Gentiana, 1 gr. }                                                         |              |               | <b>EMMENAGOGUE (Mutter).</b>                                                                                           | 4/           | 12/           |
| <b>ANTI-NERVOUS OR VALERIAN.</b>                                                 | 6/           | 20/           | { Ferri Sulph. Exsic., 1 1-2 grs. }                                                                                    |              |               |
| { Zinc Oxidum, Ext. Valerian., aa, 2-3 gr. }                                     |              |               | { Thus. Amer., 1 1-2 grs. }                                                                                            |              |               |
| { Ext. Hyoscyami, 2-3 gr. }                                                      |              |               | { Aloe Soc., 1-2 gr. }                                                                                                 |              |               |
| <b>ARSENIOUS ACID, 1-20 gr., 1-50 gr.</b>                                        | 3/6          | 10/           | <b>ERGOTIN, 3 grs.</b>                                                                                                 | 13/6         | 50/           |
| <b>ASAFETIDA, U. S. P.</b>                                                       | 3/6          | 10/           | <i>Each pill contains the active principle of 30 grains Ergot of Rye, or 30 minims of the liquid or fluid extract.</i> |              |               |
| { Asafetida, 3 grs. Pulv. Saponis, 1 gr. }                                       |              |               | <b>EUONYMIN, 2 grs.</b>                                                                                                | 13/6         | 50/           |
| <b>ASAFETIDA COMP., B. P., 4 grs.</b>                                            | 5/           | 16/           | <b>EUONYMIN, 3 grs.</b>                                                                                                | 19/          | 72/           |
| <b>ATROPINE SULPHATE, 1-300 gr., 1-100 gr.</b>                                   | 5/           | 16/           | <b>EUONYMIN COMP.</b>                                                                                                  | 13/6         | 50/           |
| <b>BLENNOSTASINE, 1 gr.</b>                                                      | 7/6          | 25/           | { Euonymin, 1 gr. Ext. Nucis Vom., 1-8 gr. }                                                                           |              |               |
| <b>BLENNOSTASINE, 3 grs.</b>                                                     | 16/6         | 62/6          | { Aloin, 1-4 gr. Ext. Hyoscyami, 1 gr. }                                                                               |              |               |
| <b>BLENNOSTASINE, 5 grs.</b>                                                     | 24/          | 87/6          | { Ext. Rhei, 1 gr. }                                                                                                   |              |               |
| <b>BLUE MASS, B. P., 1, 2, 3 grs.</b>                                            | 3/6          | 10/           | <b>EXPECTORANT OR SQUILL.</b>                                                                                          | 8/6          | 30/           |
| <b>BLUE MASS, B. P., 5 grs.</b>                                                  | 4/           | 12/           | { Scillæ pulv., 1-2 gr. }                                                                                              |              |               |
| <b>BLUE MASS, COLOCYNTH AND HYOSCYAMUS.</b>                                      | 7/6          | 25/           | { Digitalis pulv., Ipecac. pulv., aa, 1-4 gr. }                                                                        |              |               |
| { Massa Hydrarg., 1 gr. }                                                        |              |               | { Ext. Lactucaril, 1 gr. }                                                                                             |              |               |
| { Ext. Hyoscy., 1 gr. }                                                          |              |               |                                                                                                                        |              |               |
| { Ext. Colocynth. Co., 3 grs. }                                                  |              |               |                                                                                                                        |              |               |
| <b>CALCIUM SULPH., 1-10 gr., 1-4 gr., 1-2 gr., 1 gr.</b>                         | 4/           | 12/           |                                                                                                                        |              |               |
| <b>CALOMEL, COLOCYNTH AND HYOSCYAMUS.</b>                                        | 6/6          | 22/           |                                                                                                                        |              |               |
| { Hyd. Subchlor., 1 gr. }                                                        |              |               |                                                                                                                        |              |               |
| { Ext. Coloc. Co., 3 grs. }                                                      |              |               |                                                                                                                        |              |               |
| { Ext. Hyoscy., 1 gr. }                                                          |              |               |                                                                                                                        |              |               |
| <b>CALOMEL COMP., B. P. (Plummer), 4 grs.</b>                                    | 4/6          | 14/           |                                                                                                                        |              |               |
| <b>CALOMEL AND OPIUM.</b>                                                        | 6/6          | 22/           |                                                                                                                        |              |               |
| { Hyd. Subchlor., 2 1-2 grs. }                                                   |              |               |                                                                                                                        |              |               |
| { Opii Pulv., 1 gr. }                                                            |              |               |                                                                                                                        |              |               |

"McK. & R." Pills retain their solubility indefinitely.

In Ordering be careful to Specify "McK. & R."



# "McK. & R." CAPSULED PILLS.

According to Formulas of the British Pharmacopœia and other Standard Authorities.

| DOZEN BOTTLES CONTAINING                                                                                                                                |                        | 25<br>PILLS. | 100<br>PILLS. | DOZEN BOTTLES CONTAINING                                                                                                                                                                                            |                 | 25<br>PILLS. | 100<br>PILLS. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------|---------------|
| FERRUGINOUS (BLAUD).                                                                                                                                    | 3 grs.                 | 4/           | 12/           | PHOSPHORUS, NUX VOMICA AND IRON.                                                                                                                                                                                    | 5/              | 16/          |               |
| FERRUGINOUS (BLAUD),<br>{ Ferri Sulphas,<br>Potassii Carb., aa, P. R. }                                                                                 | 5 grs                  | 4/6          | 14/           | { Phosphor. Pur., 1-50 gr.<br>Ext. Nucis Vom., 1-4 gr.<br>Ferri Carb., 1 gr. }                                                                                                                                      |                 |              |               |
| HYDRASTINE (White Alkaloid).                                                                                                                            | 2 gr                   | 21/          | 80/           | PHOSPHORUS AND QUININE.                                                                                                                                                                                             | 7/              | 24/          |               |
| IPECAC COMPOUND (Ipecac & Opium),                                                                                                                       | 5 grs.                 | 7/6          | 25/           | { Phosphor. Pur., 1-50 gr.<br>Quinina Sulph., 1 gr. }                                                                                                                                                               |                 |              |               |
| IPECAC AND SQUILL, B. P.,                                                                                                                               | 4 grs.                 | 4/           | 12/           | PHOSPHORUS, QUININE, IRON AND STRYCH.                                                                                                                                                                               | 7/              | 24/          |               |
| IRON ARSENIATE,                                                                                                                                         | 1-8 gr.                | 5/           | 16/           | { Phosphorus, 1-50 gr.<br>Ferrum Reduct., 2 grs.<br>Quinine Sulphas, 1-2 gr.<br>Strychnina, 1-60 gr. }                                                                                                              |                 |              |               |
| IRON CARBONATE, B. P.,                                                                                                                                  | 5 grs.                 | 4/           | 12/           | PHOSPHORUS AND VALER. ZINC.                                                                                                                                                                                         | 6/              | 20/          |               |
| IRON BY HYDROGEN (QUEVENNE),                                                                                                                            | 1 gr.                  | 4/           | 12/           | { Phosphor. Pur., 1-50 gr.<br>Zinci Valer., 1 gr. }                                                                                                                                                                 |                 |              |               |
| IRON BY HYDROGEN (QUEVENNE),                                                                                                                            | 4 grs.                 | 6/           | 20/           | PICROTOXIN.                                                                                                                                                                                                         | 1-30 gr.        | 6/6          | 22/           |
| IRON IODIDE (Blancard),                                                                                                                                 | 1 gr.                  | 5/           | 16/           | PODOPHYLLIN,                                                                                                                                                                                                        | 1-8 gr. 1-4 gr. | 3/6          | 10/           |
| IRON AND QUININE CITRATE,                                                                                                                               | 2 grs.                 | 5/           | 16/           | PODOPHYLLIN,                                                                                                                                                                                                        | 1-2 gr.         | 4/           | 12/           |
| IRON, QUININE AND STRYCHNINE.                                                                                                                           |                        | 7/6          | 25/           | PODOPHYLLIN COMP.                                                                                                                                                                                                   |                 | 6/           | 20/           |
| { Ferrum Reductum, Quinine Sulph., aa, 1 gr.<br>Strychnina, 1-60 gr. }                                                                                  |                        |              |               | { Res. Podoph., 1-2 gr.<br>Ext. Coloc. Co. 2 grs.<br>Ext. Hyoscy., 1 gr. }                                                                                                                                          |                 |              |               |
| LAXATIVE, VEGETABLE (Improved Cathartic.)                                                                                                               | 4/                     | 12/          |               | QUININE BI-SULPHATE,                                                                                                                                                                                                | 1-4, 1-2 gr     | 3/6          | 8/6           |
| { Res. Podoph., Ext. Coloc. Co. Pulv., 1 gr.<br>Ext. Hyoscy., Jalapa Pulv.,<br>Ext. Tarax., aa, 1-4 gr. Res. Leptand., aa, 1-2 gr.<br>Ol. Menth. Pip. } |                        |              |               | QUININE BI-SULPHATE,                                                                                                                                                                                                | 1 gr            | 4/           | 11/           |
| MANGANESE BIN-OXIDE,                                                                                                                                    | 2 grs.                 | 8/           | 28/           | QUININE BI-SULPHATE,                                                                                                                                                                                                | 2 grs           | 5/6          | 15/           |
| MERCURY BIN-IODIDE,                                                                                                                                     | 1-16 gr.               | 3/6          | 10/           | QUININE BI-SULPHATE,                                                                                                                                                                                                | 3 grs           | 6/6          | 19/6          |
| MERCURY PROTO-IODIDE, 1-20, 1-16, 1-8, 1-4 gr.                                                                                                          | 3/6                    | 10/          |               | QUININE BI-SULPHATE,                                                                                                                                                                                                | 4 grs           | 7/           | 23/6          |
| MERCURY WITH CHALK, No. 1 (Hutchinson.)                                                                                                                 | 4/6                    | 14/          |               | QUININE BI-SULPHATE,                                                                                                                                                                                                | 5 grs           | 8/           | 28/6          |
| { Hydrag. cum creta, 1 gr.<br>Confect. Rosæ, q. s. }                                                                                                    |                        |              |               | QUININE SULPHATE,                                                                                                                                                                                                   | 1-4, 1-2 gr     | 3/6          | 8/6           |
| MERCURY WITH CHALK, No. 2 (Hutchinson.)                                                                                                                 | 6/                     | 20/          |               | QUININE SULPHATE,                                                                                                                                                                                                   | 1 gr            | 4/           | 11/           |
| { Hydrag. cum creta, 1 gr.<br>Doveri Pulv., 1 gr.<br>Ext. Gentianæ, q. s. }                                                                             |                        |              |               | QUININE SULPHATE,                                                                                                                                                                                                   | 2 grs           | 5/6          | 15/           |
| MERCURY WITH CHALK, No. 3 (Hutchinson.)                                                                                                                 | 7/6                    | 26/          |               | QUININE SULPHATE,                                                                                                                                                                                                   | 3 grs           | 6/6          | 19/6          |
| { Hydrag. cum creta, 1 gr.<br>Ext. Nucis Vom., 1-4 gr.<br>Ferrum Reductum, 2 grs.<br>Ext. Gentianæ, q. s. }                                             |                        |              |               | QUININE SULPHATE,                                                                                                                                                                                                   | 4 grs           | 7/           | 23/6          |
| MORPHINE MURIATE,                                                                                                                                       | 1-8 gr.                | 4/           | 12/           | QUININE SULPHATE,                                                                                                                                                                                                   | 5 grs           | 8/           | 28/6          |
| MORPHINE MURIATE,                                                                                                                                       | 1-4 gr.                | 6/           | 20/           | QUININE COMP. (Anti-Malarial.)                                                                                                                                                                                      | 11/             | 40/          |               |
| NARCOTIC EXTRACTS (Brown-Sequard).                                                                                                                      | 11/6                   | 42/          |               | { Quinine Sulph., Acid. Carbolic,<br>Ext. Ignat. Amare, Ext. Opil, aa, 1-8 gr.<br>Ext. Aconiti, 1-2 gr. Menthol., aa,<br>Ext. Cannabis Indicæ, 1-3 gr. 1-40 gr. Capsici Pulv.,<br>Ext. Stramonii, 1-5 gr. 1-4 gr. } |                 |              |               |
| { Ext. Belladonnæ, 1-6 gr. }                                                                                                                            |                        |              |               | RHUBARB COMP., B. P.,                                                                                                                                                                                               | 4 grs           | 5/           | 16/           |
| NITRO-GLYCERIN,                                                                                                                                         | 1-200, 1-100, 1-50 gr. | 6/           | 20/           | RHUBARB COMP. AND BLUE MASS,                                                                                                                                                                                        | 5 grs           | 5/           | 16/           |
| OPIUM, POWD.,                                                                                                                                           | 1 gr.                  | 6/           | 20/           | { Pil. Rhei Comp., 3 grs.<br>Pil. Hydrag., 2 grs. }                                                                                                                                                                 |                 |              |               |
| OPIUM AND CAMPHOR.                                                                                                                                      | 6/                     | 20/          |               | RHUBARB, IPECAC AND SODA.                                                                                                                                                                                           | 6/              | 20/          |               |
| { Opil pulv., 1 gr. Camphora, 2 grs. }                                                                                                                  |                        |              |               | { Pulv. Rhei, Sodii Bicarb., aa, 1 gr.<br>Pulv. Ipecac., 1-5 gr. }                                                                                                                                                  |                 |              |               |
| PEPSIN, PURE, CONCENTRATED.                                                                                                                             | 1 gr.                  | 11/          | 40/           | SOAP COMP., B. P. (Pil. Opil),                                                                                                                                                                                      | 4 grs           | 6/6          | 22/           |
| Each pill equal in digestive properties to 5 grs. Sacch. Pepsin                                                                                         |                        |              |               | SQUILL COMP., B. P.,                                                                                                                                                                                                | 4 grs           | 4/           | 12/           |
| PHOSPHORUS,                                                                                                                                             | 1-100 gr.              | 4/           | 12/           | STROPHANTHUS,                                                                                                                                                                                                       | 1-20 gr         | 6/           | 20/           |
| PHOSPHORUS,                                                                                                                                             | 1-50 gr.               | 4/           | 12/           | STROPHANTHUS,                                                                                                                                                                                                       | 1-4 gr          | 8/6          | 30/           |
| PHOSPHORUS,                                                                                                                                             | 1-30 gr.               | 4/           | 12/           | STRYCHNINE,                                                                                                                                                                                                         | 1-50 gr         | 3/6          | 10/           |
| PHOSPHORUS AND IRON.                                                                                                                                    |                        | 5/           | 16/           | STRYCHNINE NITRATE (Dipsomania),                                                                                                                                                                                    | 1-60 gr         | 3/6          | 10/           |
| { Phosphor. Pur., 1-50 gr.<br>Ferrum Reduct., 2 grs. }                                                                                                  |                        |              |               | TONIC-LAXATIVE (Fothergill).                                                                                                                                                                                        |                 | 10/          | 36/           |
| PHOSPHORUS, IRON AND QUININE.                                                                                                                           |                        | 8/           | 28/           | { Quinine Sulph., 2-3 gr. Strychnina, 1-80 gr.<br>Ferrum Reduct., Ext. Bellad., aa, 1-4 gr. }                                                                                                                       |                 |              |               |
| { Phosphor. Pur., 1-100 gr.<br>Ferri Carb. (Vallet), 1 gr.<br>Quinine Sulph., 1 gr. }                                                                   |                        |              |               | VALERIANATES IRON, QUININE AND ZINC.                                                                                                                                                                                | 13/             | 48/          |               |
| PHOSPHORUS AND NUX VOMICA.                                                                                                                              |                        | 4/           | 12/           | WARBURG TINCTURE.                                                                                                                                                                                                   | 9/              | 32/          |               |
| { Phosphor. Pur., 1-50 gr.<br>Ext. Nucis Vom., 1-4 gr. }                                                                                                |                        |              |               | Each pill represents 1 fluid drachm of the tincture.                                                                                                                                                                |                 |              |               |
|                                                                                                                                                         |                        |              |               | WARBURG TINCTURE WITHOUT ALOES.                                                                                                                                                                                     | 9/              | 32/          |               |
|                                                                                                                                                         |                        |              |               | Each pill represents 1 fluid drachm of the tincture.                                                                                                                                                                |                 |              |               |
|                                                                                                                                                         |                        |              |               | WARBURG TINCTURE WITHOUT ALOES.                                                                                                                                                                                     | 15/             | 56/          |               |
|                                                                                                                                                         |                        |              |               | Each pill represents 2 fluid drachms of the tincture.                                                                                                                                                               |                 |              |               |
|                                                                                                                                                         |                        |              |               | ZINC PHOSPHIDE,                                                                                                                                                                                                     | 1-4 gr.         | 5/6          | 18/           |
|                                                                                                                                                         |                        |              |               | ZINC PHOSPHIDE,                                                                                                                                                                                                     | 1-2 gr.         | 6/           | 20/           |
|                                                                                                                                                         |                        |              |               | ZINC VALERIANATE.                                                                                                                                                                                                   | 1 gr            | 5/           | 16/           |

Special Combinations of 3,000 or more Pills made and Capsuled to order for Hospitals and large consumers at special quotations.

McK. & R. Capsuled Pills will keep in any climate.

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Pharmaceutical Preparations.



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## McK. & R. Compound Stearate of Zinc.

FOR USE AS A DUSTING POWDER, FOR INSUFFLATIONS,  
OR AS A DRY OINTMENT.

As a dusting or toilet powder McK. & R. Compound Stearate of Zinc is superior to any other powder. It adheres to the skin, does not cake nor absorb the natural secretions thus preventing chafing. It resists moisture and is thus the powder *par excellence* for use in the nursery.

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As a dry ointment McK. & R. Compound Stearate of Zinc is soothing and healing. It does not soil the clothing.

Compound Stearate of Zinc is supplied plain or in combination with antiseptics. Lists of Combinations and prices may be obtained of our London Agents.

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Do you wish to start  
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If you do, we will  
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HALF-PLATE SET.

With

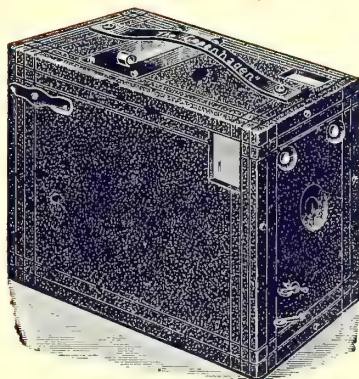
Thornton-Pickard Snap Shot Shutter,

£3 : 10 : 0

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They are the Most Artistic Ever Produced.

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A BEAUTIFULLY MOUNTED AND BOXED SAMPLE SET OF  
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# F. DARTON & Co.

Makers to H.M. Government.

ESTABLISHED 1834

Best Goggles,  
case, straight  
68a, 6/- doz.

Side ditto, 69a;  
7/6 doz.

Improved Cyclists' or Riding Goggles, London smoke glasses, with mica sides; a very efficient eye-protector, with cable twisted flexible sides, pure nickel, in cases ... 30/- doz.

Better quality  
Cyclists' Goggles,  
70a, in case, 10/6

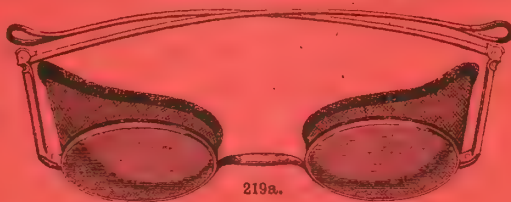
Superior quality,  
71a, in leather case,  
21/- doz.



211a.

Pure Nickel Incorrodible Metal, globular  
glasses, straight sides, 211a  
Best Quality, 212a  
with curl twisted cable sides, 213a

10/6 doz.  
15/6 "  
18/- "



219a.

Pure Nickel Pillar Goggles, flat  
fronts, worked lenses, 218a 70/- doz.

BY GENERAL  
LIST of SPEC-  
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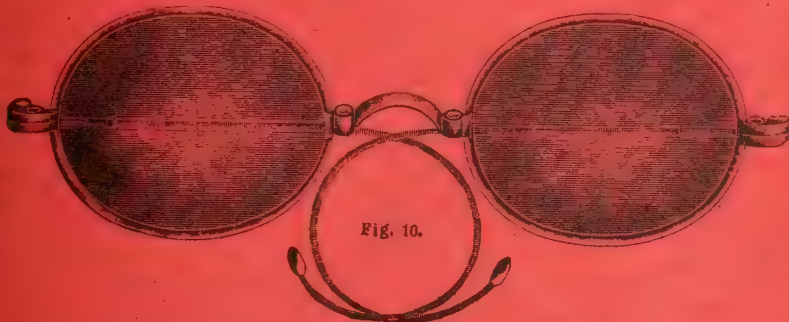


Fig. 10.

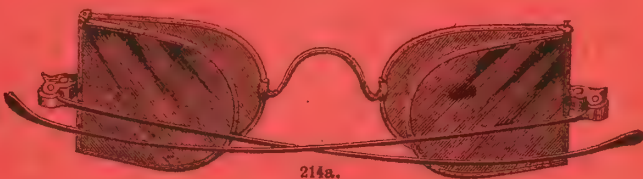
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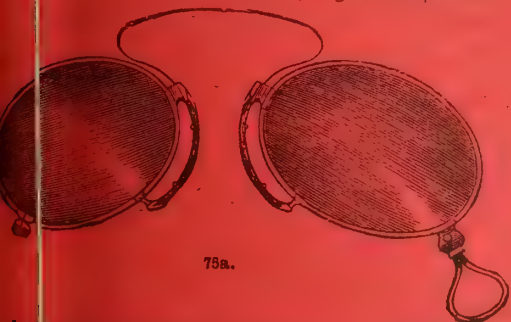
214a.

Key or Horse-shoe Spectacles  
superior finish, white metal, 215a 42/- doz.



214a.

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white metal, London smoke, 214a 24/- doz.



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Ditto, incorrodible, pure nickel, 76a 14/- "

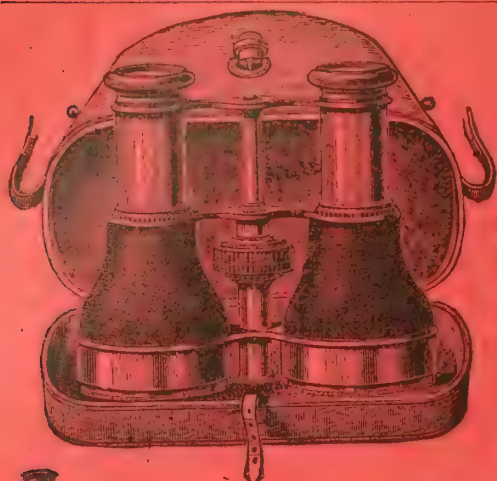


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The Long-draw 'Look-out.'



Tourist Telescope, 22 miles range,  
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Very Powerful  
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The Ever-ready Binocular,  
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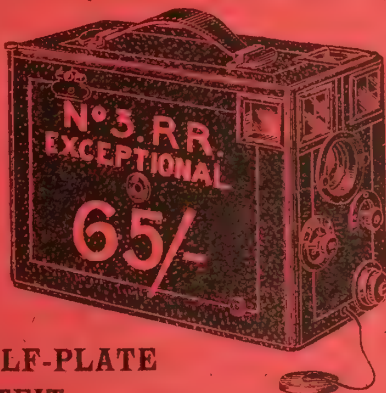
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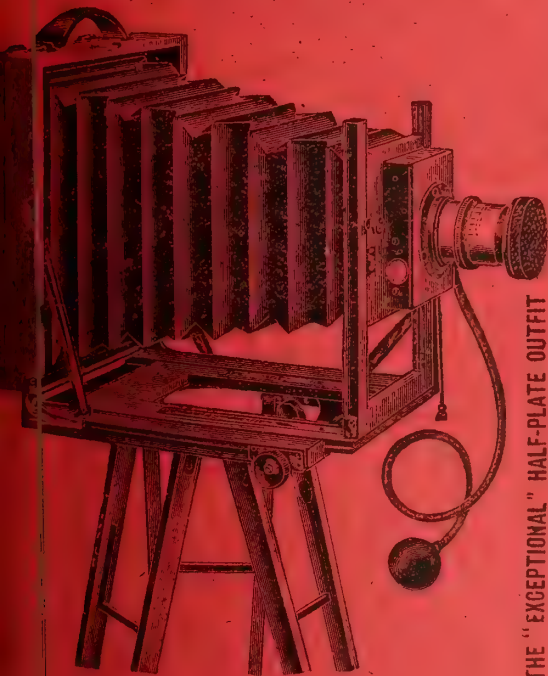
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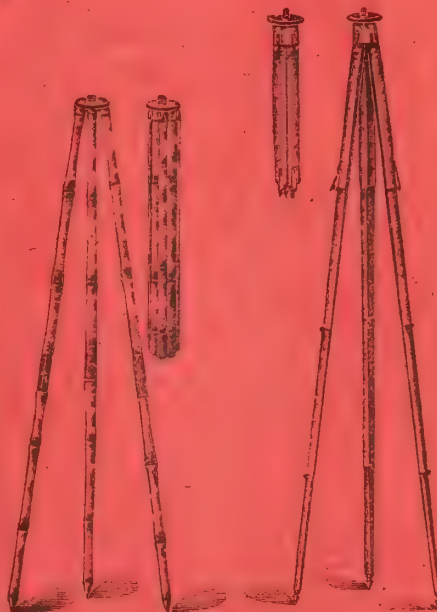
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Comprises Camera, with Leather Bellows, Reversing Frame, Rack Adjustment, Swing Back, Rising Front (the back of which slides towards the front, which is necessary for wide angle lenses).

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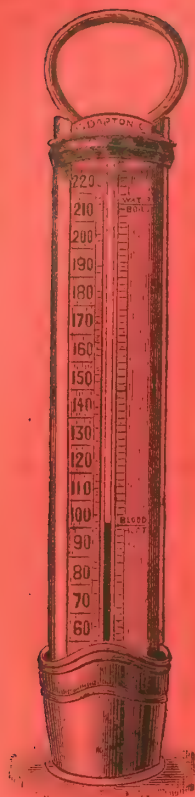
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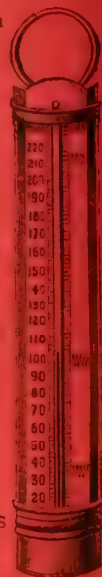
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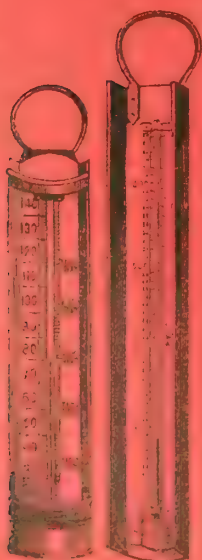
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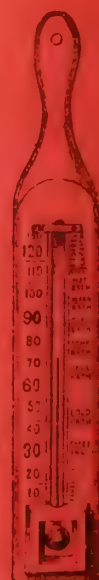
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All Metals: Gold, Gold Filled, White Metal,  
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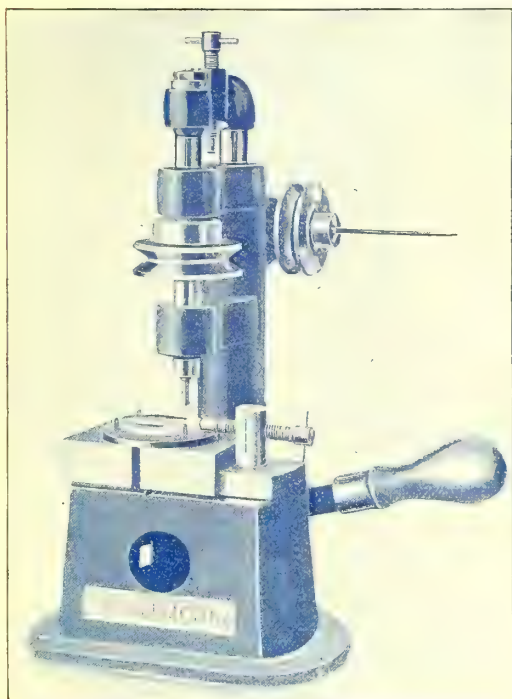
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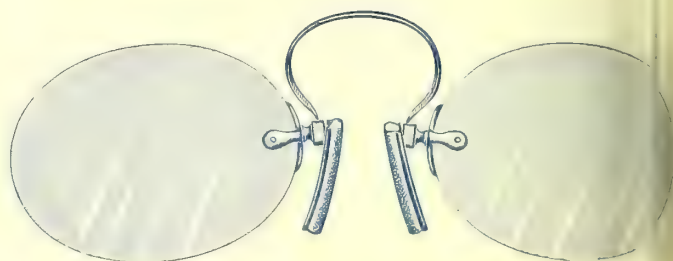
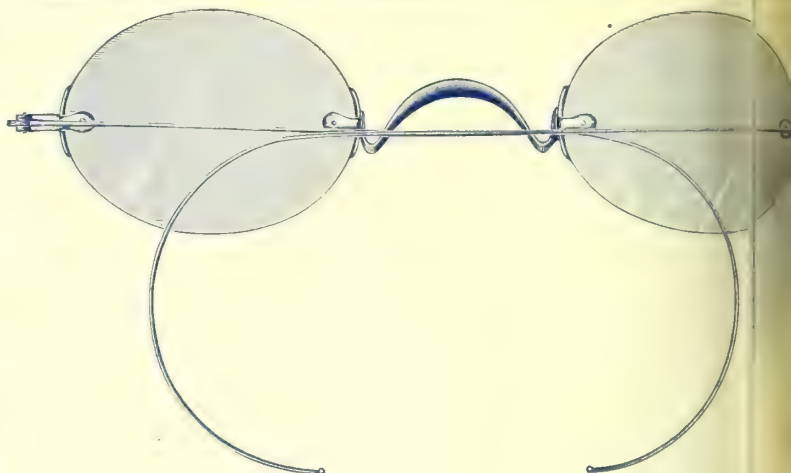


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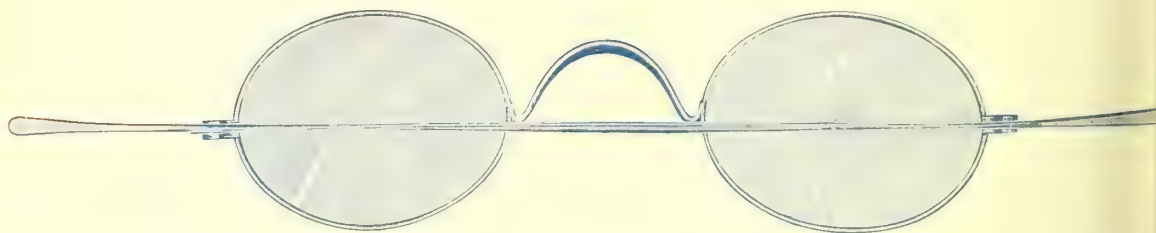


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Drills all rimless lenses exactly on pupillary line or accurately above or below center, if desired.

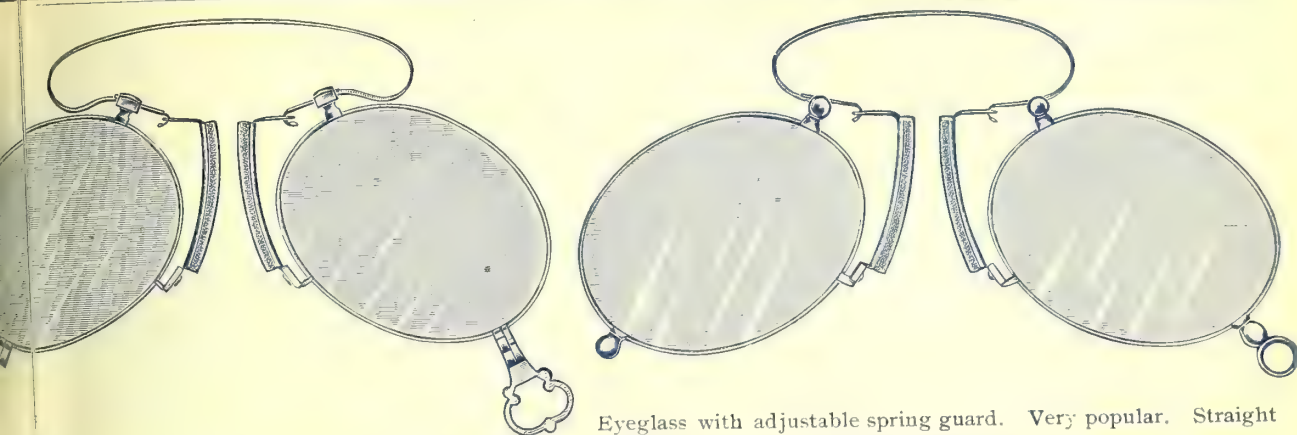


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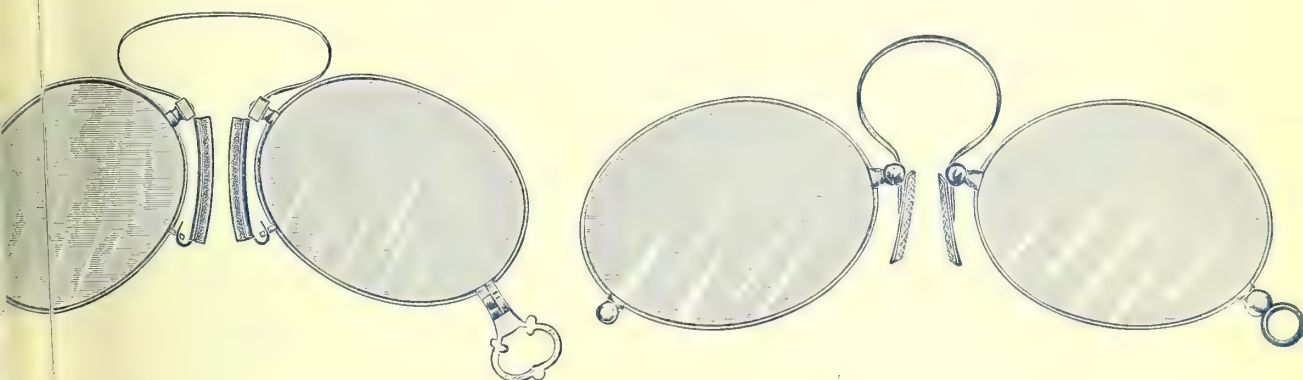


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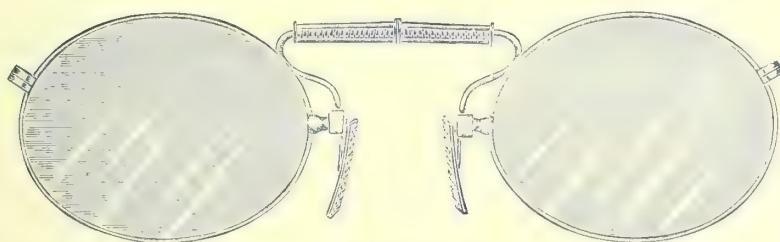




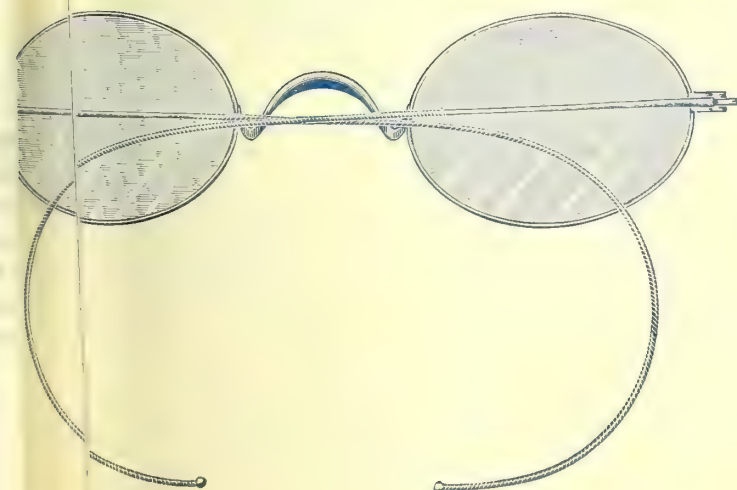
er with special English spring, straight or offset guards. Eyeglass with adjustable spring guard. Very popular. Straight and offset guards.



Clips. Cork or shell guards. Straight or offset



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We are prepared to furnish spectacles or eye-glasses similar to any of the styles we illustrate in steel, white metal or solid gold as well as gold-filled.

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## THE AUROCONE.

"Always Adjusted, Always Comfortable."



For Frame or Frameless Goods.

The temples are provided with a celluloid cone which rests behind the ear, to which it is adjusted and when so fitted will never need re-adjusting. No case where carefully fitted has been known to give any but the most perfect comfort and satisfaction.



The cones are sent loose on the temple as in Figure I.



The optician measures the distance from the end piece of the spectacle to the top of the ear, crimps the temple as in Figure II, (A).



He then draws the cone over the bend which firmly holds it in position by friction. The end is then bent downward to an angle of about 45 degrees, as in Figure III and the fit is perfect.



The above cuts show the cone and its position behind the ear resting naturally and easily in the V-shaped groove formed by the ear and head.



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TO CONTAIN A BOTTLE OF

# Eno's 'Fruit Salt.'

It prevents any over-acid state of the blood, and should  
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It ALWAYS does GOOD—NEVER any HARM. It forms a DELIGHTFUL, INVIGORATING, COOLING, SOOTHING, and HEALTH-GIVING beverage. It acts as simply, yet just as powerfully, on the animal system as sunshine does on the vegetable world, and REMOVES BY NATURAL MEANS, without hazardous force, all fœtid or POISONOUS MATTER. It is IMPOSSIBLE to OVERSTATE its GREAT VALUE in HEALTH or DISEASE.

*The effect of ENO'S 'FRUIT SALT' upon any DISORDERED, SLEEPLESS, and FEVERISH condition is simply MARVELLOUS. It is, in fact, NATURE'S OWN REMEDY, and an UNSURPASSED ONE.*

**CAUTION.**—See Capsule marked ENO'S 'FRUIT SALT.'  
Without it you have a WORTHLESS imitation.

## TO RETAILERS.

Show Cards, Dummies, and Counter Bills will be supplied on application, either direct or through the Wholesale Houses, on our receiving a postcard stating requirements.

PREPARED ONLY BY

**J. C. ENO., Ltd., 'Fruit Salt' Works, LONDON, S.E.**

**By J. C. ENO'S Patent.**

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OUR RIGHTS have been established by decisions of the House of Lords and other Courts, and perpetual Injunctions and damages have been obtained against offenders.

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J. C. ENO, LTD.

**Season**  
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**FRUIT**  
**ESSENCES.**  
  
**RASPBERRY.**

*Distillers of*  
SPIRIT. ÆTHER. NIT. and SOL. ÆTHER. NIT.  
SPIRIT. AMMON. AROM.

*Special Makers of*  
BELLADONNA, CASCARA, IPECACUANHA, and OPIUM  
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MUSK and VANILLA Essences.  
EMULSION of COD LIVER OIL  
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PETROLEUM preparations of all kinds.

*Dealers in*  
SULPHUR-FREE WHITE PETROLEUM OILS, &c., &c.

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**FRUIT**  
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EUONYMIN. et PEPSINÆ.

EUONYMIN. et PAPAIN.

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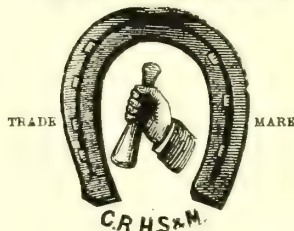
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*Counter Specialities put up  
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**Petroleum Emulsion**

*Palatable.* **Hypophosphites.** *Inseparable.*

*Price 1/3 per lb. In 6-oz., 8-oz., and 16-oz. bottles,  
printed cartons, 8/6, 10/6, and 16/6 per doz.*

*Concentrated Liquors for  
TINCTURES and SYRUPS.*

SYRUP. EASTONII.

SYRUP. HYPO-  
PHOSPH. CO.

ELIXIR NITROSUM

*and*

AMMON. AROMAT.

CONCENTRATED WATERS

*Non-Official Preparations,  
&c., &c.*

CONCENTRATED

INFUSIONS.

LIQUOR SANTAL. CO.

COCA WINE.

*Excisable and non-excisable.*

DEËMETINISED

IPECACUANHA.

EDULCORATED CASTOR

OIL, &c., &c.

*Proprietors of Field's Select  
Preparations.*

**Season**  
**1900**  
**FRUIT**  
**ESSENCES.**

**BLACK**  
**CURRENT,**  
*&c., &c.*

**Season**  
**1900**  
**SYRUP.**  
**RHÆADOS,**  
**UNG. FLOR.**  
**SAMBUCL.**



# Pepsin in Fine Scales.

An Aseptic, Potent, and  
Reliable Product.

B.P. in Quality.

Good for Galenicals.

Moderate in Price.

A FINE SCALE PEPSIN is now being put on the market by Messrs. Randall & Son, of Southampton. The pepsin appears to be prepared by an aseptic method, for it is devoid of the peptonic odour which characterises many commercial pepsins and is evidence of the presence of membranous matter. The pepsin occurs in pale yellow translucent scales, and dissolves readily in cold water, forming an almost odourless solution. We find its digestive power to be fully that required by the Pharmacopœia, and it will be observed from the other characters of the pepsin that it is especially suitable for the preparation of liquor pepsini and vinum pepsini.

*The Chemist and Druggist, July 14, 1900.*

## Randall & Son,

Manufacturing Pharmaceutical Chemists,

Southampton.

# MAGNESIA

(Pattinson's)

CARBONATE, CALCINED, AND FLUID.

THE WASHINGTON CHEMICAL CO., LIM., WASHINGTON, COUNTY DURHAM, ENGLAND.

London Agents—Messrs. CLIFFORD CHRISTOPHERSON & CO., 21 Mincing Lane, London, E.C.

# BARRON, HARVEYS & CO.

WHOLESALE AND EXPORT DRUGGISTS,

GILTSPUR STREET, LONDON, E.C.

Beg to inform their friends and the Trade generally that, being Sole Proprietors of the Business of

BARRON SQUIRE & CO., BUSH LANE,

and also the various Formulæ of the Special Preparations of

JAMES BASS & SONS, HATTON GARDEN.

they are prepared to execute orders for the same, and pledge themselves to supply them in all their integrity.

SPECIMENS OF THESE PREPARATIONS have REMAINED in the MUSEUM of KEW GARDENS during 26 YEARS WITHOUT DETERIORATION.

**"SWEET" PEARL COATED PILLS.**  
TINCTURES, ETC., IN BOND.

# EVANS, SONS & CO.

## LIVERPOOL.

OFFICES—56 HANOVER STREET.

DEPARTMENTS—

# Drugs, Chemicals & Pharmaceutical Preparations.

*DRUGGISTS' SUNDRIES of Every Description.*

## PATENT MEDICINES & PROPRIETARY ARTICLES

Shop Fixtures and Fittings, Show Cases, &c.

## PHOTOGRAPHIC APPARATUS, REQUISITES, AND CHEMICALS.

Lime Juice and Cordials—Sole Consignees of "Montserrat"

Lime Fruit Juice.

### OFFICES AND WAREHOUSES—

56 Hanover Street, and 1 to 9  
Seel Street.

TINCTURE HOUSE AND PILL FACTORY,  
AND ESSENTIAL OIL DISTILLERY—  
26 to 38 Wood Street.

### LABORATORIES and DRUG MILLS—

25 to 29 Fleet Street.

### SHOP FITTINGS FACTORY—

71 Fleet Street.

### LIME JUICE STORES—

34 to 36 Fleet Street.

**MANCHESTER**—1 and 2 Exchange Buildings, Market St.

**BIRMINGHAM**—48 International Exchange.

OUR LISTS SUPPLIED TO REGISTERED CHEMISTS ONLY.

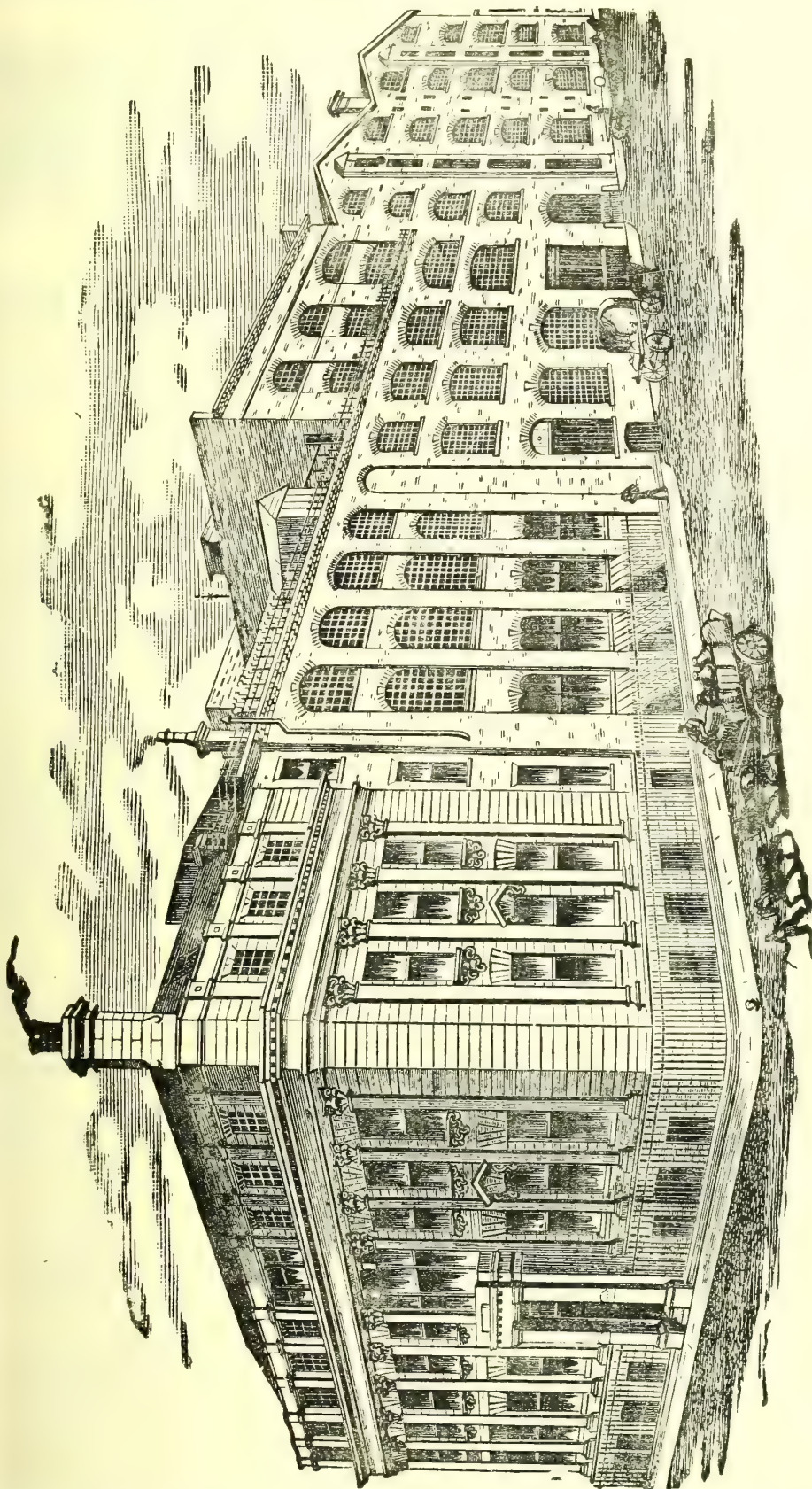
LONDON—

EVANS, LESCHER & WEBB.

CANADA & UNITED STATES—

EVANS AND SONS, LIMITED.





# EVANS, SONS & CO., LIVERPOOL.

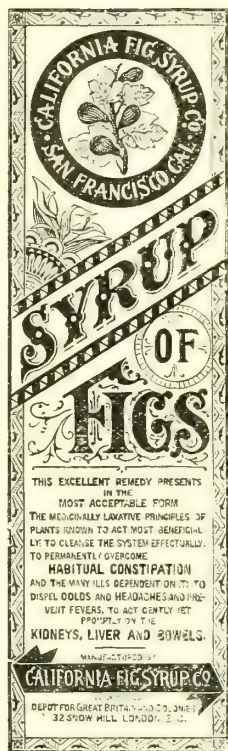
ENLARGED PREMISES, 56 HANOVER ST., and SEEL ST., LIVERPOOL.



# SYRUP OF FIGS

## The California Fig Syrup Company

SUSTAIN THEIR RIGHT TO THIS TITLE



*Reduced facsimile of front of Package.*  
None other is genuine.

**CALIFORNIA FIG SYRUP CO., v. CLINTON E. WORDEN & Co., J. A. BIRG T. F. BACON, E. LITTLE, C. J. SHIMMER and LUCIUS LITTLE, Defendants.**

*In the Circuit Court of the United States, in and for the Ninth Circuit, Northern District of California, on the 5th Jun 1899 the CALIFORNIA FIG SYRUP COMPANY obtained a PERPETUAL INJUNCTION with Costs against the Defendants, together with the recovery of profits received or made by the Defendants arising from the infringement of the rights of the CALIFORNIA FIG SYRUP COMPANY by using and selling a liquid laxative medicine under the title of "SYRUP OF FIGS" or "FIG SYRUP." The following is an extract from the order obtained against the Defendants:—*

The Court doth hereby order, adjudge, and decree as follows, to wit:—

That the name or term "Syrup of Figs" or "Fig Syrup" was first applied by R. E. Queen, the predecessor of the California Fig Syrup Company, to a liquid laxative medicine, and since the year 1879 the California Fig Syrup Company and its said predecessor, R. E. Queen, have used the said name as the designation of a liquid laxative medicine. That the said medicine has become known in the drug trade, among physicians, and by the public generally as "SYRUP OF FIGS" or "FIG SYRUP," and whenever said term is used in the drug trade only persons the Company's said preparation is understood to be referred to. That large quantities of said medicine have been sold under said name, and the business of the California Fig Syrup Company in preparing and selling said medicine is very extensive and valuable.

That the Defendant CLINTON E. WORDEN & CO. has manufactured, and all the Defendants have sold, a liquid laxative medicine marked with said name in imitation of the name used by the California Fig Syrup Company, and for the purpose of and with the design and intent of inducing purchasers to buy Defendants' said preparation instead of that of the California Fig Syrup Company. That by so doing the said Defendants and each of them have infringed upon the exclusive right of the California Fig Syrup Company to the use of the name "SYRUP OF FIGS" or "FIG SYRUP" as applied to a liquid laxative medicine.

And it is further ordered that the California Fig Syrup Company do have and recover of and from the said Defendants the profits which said Defendants, or either of them, have received, or made, or which have accrued to them, or either of them, from the infringement of the rights of Complainant by using said name by the making, using, and selling of said liquid laxative medicine, having placed thereon the name "SYRUP OF FIGS" or "FIG SYRUP," or any other name in imitation of Complainant's said medicine, together with the costs of this action.



# SYRUP OF FIGS.

The California Fig Syrup Company

SUSTAIN THEIR RIGHT TO THIS TITLE.

And it is further ordered, adjudged, and decreed that a PERPETUAL INJUNCTION be issued in this case against the said Defendants, restraining and perpetually enjoining them each of them from making, manufacturing, or using or selling, or offering for sale, or in any way disposing of a liquid laxative medicine or preparation under the name "SYRUP OF FIGS" or "FIG SYRUP," or under any name in colourable imitation of the name "SYRUP OF FIGS," and from using the name "FIG SYRUP COMPANY," and from using a name hereinafter the words "FIG SYRUP" or "SYRUP OF FIGS COMPANY" form a part as a trade name in connection with the manufacture of a liquid laxative preparation, pursuant to the prayer of the said bill of complaint.

The above decision in the case of Clinton E. Worden & Co., has recently been affirmed by the UNITED STATES COURT OF APPEALS. The decision established the exclusive right of the California Fig Syrup Company to the use of the name "Syrup of Figs" or "Fig Syrup," and enjoins the defendants in the suit from using these names for any laxative preparation made by them.—Reported in CHEMIST AND DRUGGIST, June 2nd, 1900.

THE CALIFORNIA FIG SYRUP COMPANY have adopted vigorous measures to protect their large and growing business from the attacks of would-be imitators.

CALIFORNIA SYRUP OF FIGS is being largely advertised, and Chemists can give more satisfaction to their customers by supplying the original and genuine preparation which customers require when asking for "SYRUP OF FIGS."

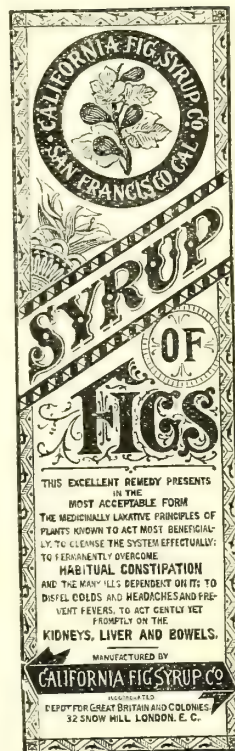
In two sizes, 1/1½ and 1/9.

ATTRACTIVE SHOWCARDS AND COUNTER BILLS ON APPLICATION.

## California Fig Syrup Company.

British and Colonial Depot:

FASSETT & JOHNSON, 31 & 32 SNOW HILL, LONDON, E.C.



Reduced facsimile of front of package.  
None other is genuine.

# HUBBUCK'S PURE OXIDE OF ZINC.

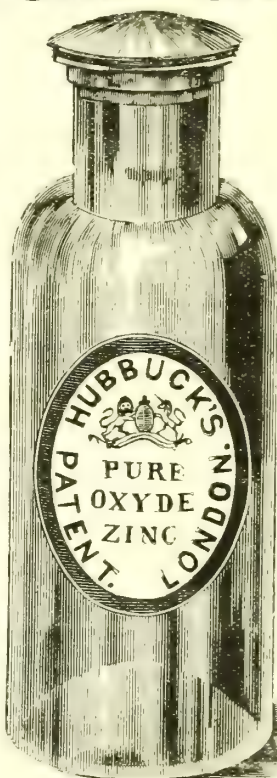
Sold by the following Wholesale Druggists in Boxes of 7 lbs. and 14 lbs., stamped by the Manufacturers; also in 1-lb. Boxes and 1-lb. Glass Bottles:—

Allen & Hanbarys Ltd.  
Anderson & Co.  
Baiss Brothers & Co.  
Barron, Harveys & Co.  
Battley & Watts.  
Bleasdale, Limited.  
Burgoyne, Burbridges & Co.  
Clay, Dod & Co.  
Cockburn & Co. (Lim.)  
Corbyn, Stacey & Co.  
Dakin Brothers.  
Davy, Hill & Son, Yates & Hicks.  
Duncan, Flockhart & Co.  
Evans, Gadd & Co.  
Evans, Lescher & Webb.  
Ferris & Co.  
Gale & Co.  
Glasgow Apothecaries' Co.  
Harker, Stagg & Morgan.  
Hatrack, W. & R., & Co.  
Hearon, Squire & Francis.  
Herrings & Co.

Hirst, Brooke & Hirst.  
Hodgkinson, Prestons & King.  
Hodgkinsons, Olarke & Ward.  
Horner & Sons.  
Huskisson, H. O., & Co.  
Ismay, John, & Sons.  
Lothhouse & Saltmer.  
Mackey, Mackey & Co.  
Oldfield, Pattinson & Co.  
Pinkerton, Gibson & Co.  
Raines, Clark & Co.  
Raines & Co.  
Southall Bros. & Barclay.  
Summer, R., & Co.  
Taylor, James.  
Thompson, John (Lim.)  
Tyrer, Thos. & Co.  
Walker, Troke & Co.  
Willows, Francis & Butler.  
Woolley, Jas., Sons & Co. (Lim.)  
Wright, Layman & Umney.  
Wyleys (Lim.)

Carter, Carter & Kilham  
Boston.  
Finlay & Branswig, New Orleans.  
Langley & Michaels, San Francisco.  
Lasell, Dalley & Co., New York.  
Lehn & Fink, New York.

McKesson & Robbins  
New York.  
Muth Brothers & Co., Baltimore.  
Roller & Shoemaker, Philadelphia.  
Schieffelin, W. H., & Co., New York.  
Shoemaker, R., & Co., Philadelphia.  
Weeks & Potter, Boston.



## HUBBUCK'S PURE OXIDE

Is made by Sublimation, and is Warranted to contain upwards of

**99 PER CENT.**

of Pure Oxide; in fact, the impurities are not traceable

**THOS. HUBBUCK & SON, L<sup>td</sup>**

(Established 1785),

**24 LIME STREET,  
LONDON, E.C.**

Manufacturers of

**White Lead, White Zinc,  
Paints, Oils,**

**Colours, Varnishes, &c.**

▲ AUSTRALIAN OFFICE—

**34 QUEEN STREET, MELBOURNE.**

The Manufacturers supply their Pure Oxide Wholesale only, in quantities of not less than 2 cwt.

## Notice of Removal.

**ROBERT FERBER & CO.**

TRADE



MARK.

Notify that they have removed from 14 Upper Thames Street, E.C., to larger and more convenient premises at

**195 SOUTHWARK BRIDGE ROAD, S.E.**

to which address they request all communications to be addressed after this date.

**ROBERT FERBER & CO.,**  
Wholesale Druggists and Medicinal Capsule Makers,  
**195 SOUTHWARK BRIDGE ROAD,**  
June 25, 1900. **LONDON, S.E.**

IMPORTANT NOTICE.—To secure Patients against Fraud every bottle bears the British Government Stamp, with the words DR. LALOR'S PHOSPHODYNE, London, England, engraved thereon, by order of her Majesty's Honourable Commissioners. If not, it is a Forgery.

## DR. LALOR'S PHOSPHODYNE

For over FORTY YEARS has maintained its world-wide reputation as

**THE ONLY SAFE RELIABLE PHOSPHORIC CURE** for Brain Wreckage, Paralysis, Sleeplessness, Harassing Dreams, and all Functional and Diseased Conditions of the System dependent upon the Deficiency of the Vital Forces.

## DR. LALOR'S PHOSPHODYNE

**HAS THE LARGEST SALE OF ANY PHOSPHORIC MEDICINE IN THE WORLD.**

The only Medicine of the kind or name awarded a Certificate of Merit at the Calcutta Exhibition, 1883-4.

**TRADE MARK—“PHOSPHODYNE.”**

THOUSANDS of unimpeachable Testimonials from all parts of the World. No other Phosphoric Preparation has received such exalted praise and distinguished recognition.

To be obtained in Bottles at 4s. 6d. from all Chemists, &c., &c.

MANUFACTURED ONLY AT

**DR. LALOR'S PHOSPHODYNE LABORATORY,  
HAMPSTEAD, LONDON, N.W.**

CHEMISTS enclosing Trade Card will be supplied free with a neat Showcard.



HIGHEST AWARD CHICAGO EXHIBITION, 1893.

**T. & H. SMITH & CO.**

Telegrams—  
Meconic,  
Edinburgh.



Telegrams—  
Meconic,  
London.

TRADE MARK-REGISTERED

**HEAD QUARTERS  
FOR  
MORPHINE AND SALTS  
CODEINE AND SALTS  
CHLOROFORM, PURE B.P.**

ANSWERING ALL THE RECOGNISED PURITY TESTS.

**ALOIN.**

**CAPSICINE.**

**GINGERINE.**

**SALICINE.**

**CANTHARIDINE.**

**ERGOTINE.**

**JALAPINE.**

**SCAMMON. RESIN.**

AND OTHER ALKALOIDS AND FINE CHEMICALS.

ALSO SOLE PROPRIETORS OF

**TELA VESICATORIA**  
Or Blistering Tissue,  
AN EFFICIENT SUBSTITUTE FOR THE ORDINARY CANTHARIDES  
PLASTER, WITH NONE OF THE  
DISADVANTAGES ATTENDING THE USE OF THE  
CRUDE FLY.

**EDINBURGH & 12 WORSHIP STREET, LONDON**

# PRECIPITATED CHALK

(CRETA PRÆCIP., B.P.)

Whitest and Purest article for Dentifrices, Toilet and Pharmaceutical purposes.

**CHEAPEST SELLERS IN THE MARKET.**

**AUG. LEVERMORE & CO., 34 Lime Street, LONDON, E.C.**

Telegraphic Address—"LEVERMORE LONDON."

A B C Code used.

**CHEMICALS, COLOURS, OILS, AND DRYSALTERIES.**

Prepared, French, Finger, Billiard, Coloured Chalks and Crayons of all descriptions.

## SCOTTISH ACID & ALKALI CO.

(LIMITED),

Mr. R. H. STEEDMAN, Managing Director.

MANUFACTURERS OF

**RESUBLIMED IODINE,**

**PURE IODIDES of POTASSIUM & SODIUM,**

**IODOFORM,**

**Commercial Sulphuric Acid.**

Registered Office—188 ST. VINCENT STREET, GLASGOW

Works—Longford Chemical Works, KILWINNING, Ayrshire.

Sole Agents—KIRKPATRICK, BARR & GUTHRIE, 4 Cullum Street, LONDON, E.C.

*Special Quotations on Application.*

## 100 YEARS' REPUTATION.

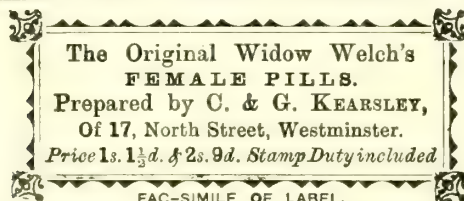
Awarded Certificate of Merit.

**KEARSLEY'S**

**Original Widow Welch's Pills**

UNIVERSALLY ACKNOWLEDGED TO BE **THE GENUINE.**

RETAILERS MAY SAFELY RECOMMEND THEM.



The Original Widow Welch's

**FEMALE PILLS.**

Prepared by C. & G. KEARSLEY,

Of 17, North Street, Westminster.

Price 1s. 1½d. & 2s. 9d. Stamp Duty included

FAC-SIMILE OF LABEL.

Prices to the Trade:—13½d. .. 9/6 per doz. 2/9 .. 23/- per doz  
13 to the dozen of the 2/9 size.

Minimum Re-selling Prices:—13½d. .. 1/- 2/9 .. 2/6.

**LIVING PROFITS GUARANTEED.**

The Retailer knows that KEARSLEY'S are THE GENUINE, and we trust the Trade will explain this to all Customers who ask for Cheaper Imitations.

*Special Quotations to Shippers and for large quantities by application to C. & G. Kearsley.*

Supplied in BOTTLES for EXPORT, 13 to doz. 2/9 size, same terms as Boxes.

UNLESS SO PACKED WE CANNOT BE RESPONSIBLE.

N.B.—Chemists can have attractive Show Card, also Hand Bills, sent free by application to C. & G. Kearsley, 17 North Street, Westminster. Chemists in the Colonies through their Wholesale House.

## CONGREVE'S

THE MOST EFFICACIOUS REMEDY IN

**Pulmonary Consumption**

*Proved for 70 years.*

**BALSAMIC**

For COUGHS, CATARRH, ASTHMA, CHRONIC BRONCHITIS, &c.

Will NOT cure every disease.

Sold by Chemists and Patent Medicine Vendors.

Take no substitute.

**ELIXIR.**

Mr. G. T. CONGREVE'S Book on "CONSUMPTION, &c.," from Coombe Lodge, Peckham, London, S.E. 6d. and 1s., Post Free.

## SUGAR COATED PILLS

Composed of the Purest Drugs  
Leading Varieties at Lowest Prices.  
**SUPERIOR TO PEARL COATING**  
CATARRH OF THE NOSE & THROAT in Tubes  
on Cards, or Boxes, 8/- per gross.  
Speciality:  
PRIVATE RECIPES.  
Scottish Sugar-coated Pill Co.  
Washington St., GLASGOW.  
Send Business Card for Samples and Price List.

## COMPOUND SULPHUR TABLETS

(12 to the Ounce).

1 cwt. carriage paid, 36/- net cash.

" " " 19 - "

Packed in Free 7-lb. Boxes.

These Tablets are of first-class quality and excellent finish, and do not contain any artificial colouring matter.

**JULES DENOVAL & CO**

Carlton Works, New Cross Road, LONDON, S.E.



# To Judge

the quality of Shaving Soap is an accomplishment which every Chemist should possess.

Those who shave no doubt know a good deal about the subject.

If you do not shave, we will tell you in a few lines how you can get at the point of issue.

The Soap should answer in the first place to the requirements of a first-class Complexion Soap, as it is longer in contact with the tender skin of the face than is the case with a Toilet Soap used only for washing. Soaps containing free alkali in an appreciable amount should be discarded.

A Chemist can easily determine this by using a weak solution of Phenolphthalein, or any of the other usual tests.

What is especially important to make a Shaving Soap *par excellence* is the quality of the lather produced by the soap.

This should be a **fat** lather which does not dry on the skin while shaving.

It should feel more like a **cream** than a **watery** lather; the latter generally shows large air bubbles, while the lather of an excellent Shaving Soap should in appearance and to the touch be more like a cream.

Every manufacturer will tell you that his product is the best, and therefore we respectfully ask you to judge the matter for yourself.

Should you take an interest in supplying a good Shaving Soap, try ours against any other Shaving Soap in the market. If you do not shave, make the lather with a brush or otherwise with different Shaving Soaps, keep these lathers under your observation, and note that the lather should remain moist and creamy.

For a fair test, leave the lather on a marble slab or on earthenware exposed to the air. We do not say that our Shaving Soap is the best, since you are easily able to judge.

---

## H. BRONNLEY & CO., LD.

### Superfatted Soaps. Tooth Soaps.

SPECIALITIES MADE FOR THE TRADE.

31 & 35 DANBURY STREET, ISLINGTON, N.

TELEGRAPHIC ADDRESS: "SAPONACITY LONDON."

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We put up our Shaving Soap as "private brands" with your own name and address, in any shape you like.

To show the quality of our new Shaving Soap, we have put up a line of Cakes in Metal Boxes under the style of "COURVOISIER'S SHAVING TABLETS," at 45/6 per gross nett, which line we send out in quantities of not less than 1 gross. If you wish to try the Soap before buying, kindly drop us a postcard and we will send you a gratis tablet.

**LARGEST SALES! QUICKEST TURNOVER!**

**WORTH A GUINEA A BOX.**

# BEECHAM'S PILLS

FOR ALL



Contains 56 Pills.

**Bilious and Nervous Disorders,  
Sick Headache, Constipation,  
Wind and Pains in Stomach,  
Impaired Digestion,  
Disordered Liver, and  
Female Ailments.**

*The Sale now EXCEEDS SIX MILLION BOXES per annum.*

**DRUGGISTS WILL FIND BEECHAM'S PILLS THE MOST  
SALEABLE PATENT MEDICINE IN THE MARKET.**

## BEECHAM'S COUGH PILLS

STAND UNRIVALLED FOR

***Coughs, Asthma, Bronchial Affections, Hoarseness, &c., &c.***

In Boxes, 1s. 1 1/2 d. and 2s. 9 d. each, with full directions.

## BEECHAM'S TOOTH PASTE

**RECOMMENDS ITSELF.**

It is Efficacious, Economical, Cleanses the Teeth, Perfumes the Breath, and is a Reliable and Pleasant Dentifrice.  
In Collapsible Tubes, of all Druggists, **ONE SHILLING** each.

**Home Retailers** of BEECHAM'S PILLS desirous of exhibiting Show Cards, Dummies, and wishful to have a good supply of Handbills (various sizes and colours, with name and address at foot), Oracles, Puzzles, &c., should apply to the Proprietor—

**THOMAS BEECHAM, ST. HELENS, LANCASHIRE.**



**NEW**  
**PRICE**  
**LIST**

**NOW READY.**

*. . . Manufacturers of . . .*  
FLUID EXTRACTS,  
CONCENTRATED INFUSIONS,  
TINCTURES, and all  
PHARMACEUTICAL PREPARATIONS.  
COMPRESSED TABLETS.  
GRANULAR PREPARATIONS prepared  
in our own Laboratory.

**MANNERS &**

A. B. C.  
Code Used.  
4 Edition.

Telegraphic  
Address—  
"SULPHONAL  
LONDON."

**HOPKINSON**

**66 SOUTHWARK BRIDGE ROAD, LONDON, S.E.**

**Wholesale & Export Druggists.**

**STANDARDIZED DRUGS & PURE CHEMICALS.**

**COATED**

**TASTELESS PILLS**

*(B.P. and Selected Formulæ).*

**"LITTLE PILLS," NONPAREIL CAPSULES AND PERLES.**

TRIPLE PERFUMES.

FRUIT ESSENCES.

TESTED ESSENTIAL OILS.

SCALE PREPARATIONS.

EXT. MALT & EXT. MALT & COD-LIVER OIL.

***Special Quotations to Large Buyers on Application.***

**Nota****Gene****DRUGS**

PURE CHEMICALS  
 PHARMACEUTICAL  
 PREPARATIONS

**Best**

**MACKEY  
 MACKEY  
 & CO.**



LIMITED.

**quality.****Specialities.**

Mistura Bismuthi Co.  
 Mistura Cerii Co.  
 Glycerol Pepsinæ et  
 Euonymin.  
 Glycerol Podophylli.  
 Mistura Cascaræ  
 Sagradæ Co.  
 Liquor Santal Co.  
 Eucalyptol, Terpinol, and  
 Carbolic Disinfectant.

**Pills.**

Soluble, Transparent and  
 Pearl Coated.

~~~~~  
 MACKEY, MACKEY & CO.  
 Ltd.

175 Grange Road,  
 Bermondsey,  
 LONDON, S.E.

Tel. No. 589 Hop.

Telegrams:  
 "Terpinol London."



# NOW



is the time to sell an Alterative, and we commend SYRUP TRIFOLIUM COMPOUND. It has stood the test, having been successfully before the profession for over twelve years. In the formula are embodied Red Clover, Stillingia, Burdock, Poke Root, Berberis Aquifolium, Cascara Amarga, Prickly Ash, with eight grains of Potassium Iodide to the fluid-ounce.

The cumulative action of Potassium Iodide when given alone is well understood, but in the above combination its administration may be prolonged, and the dose gradually increased, without producing gastric or intestinal disturbance.

SYRUP TRIFOLIUM COMPOUND is a splendid blood purifier.

IN PINT BOTTLES.

IN  $\frac{1}{2}$ -GAL. BOTTLES.

SEND FOR PARTICULARS.

HAVE YOU A COPY OF OUR 1900 PRICE LIST?

## Parke, Davis & Company,

111, QUEEN VICTORIA STREET, LONDON, E.C.

# EDGAR'S CROUP

Did you see our "Free Bills" at the Chemists' Exhibition? If not, send for particulars at once, and be in time for the Autumn distribution.

## LOTION.

Prescribed by "Physicians and Doctors"  
throughout the civilised World.

*Handsome "Bills," "Showcards," and "Dummies"  
sent Free and Carriage Paid.*

# 30% PROFIT



# SOME YEARS AGO

My father died very suddenly and left a 40 years' established chemist's business to his only son, then quite young.

I immediately saw the serious side of life, and placed myself under a "coach" preparatory to examination.

Loving materia medica and therapeutics, I usually read to the small hours of the morning, until my health began to suffer.

Finding it necessary to obtain a safe and speedy cure for Headache, I was led by the remarks of a German Doctor to experiment in a hitherto untrodden field.

Some years passed. Eventually the result was a small powder, practically tasteless, very convenient, speedy, safe, and a remarkable cure for Headache.

I recommended my new cure in the shop, and called it Daisy.

In one month the sales of the new remedy outstripped the sales of all the other headache remedies I sold put together.

This set me thinking.

---

**DAISY, Limited, MAMMOTH WORKS, LEEDS,**

Telephones—1990 and 1360.

Telegrams—"Daisy Leeds."

# IN THREE MONTHS ONLY.

In three months I was selling as much of the new Headache cure as all the other goods in the shop put together.

This set me acting.

I put every penny I had in one venture, and spent the lot on Daisy.

I gave away thousands of the new cure.

Daisy didn't disappoint me. What happened is just this :—

The first fifteen months I sold 500,000 Daisies.

The second year I sold 2,500,000.

The third year I sold 6,000,000.

The fourth year sales went up to 1,000,000 Daisies per month.

What the turnout is just now I do not care to say. Suffice it to mention that large numbers of new customers are made **every day**. We have only quite recently enormously increased our floorage.

It will, perhaps, better prove Daisy's remarkable growth to show a few views of the several Daisy factories, and I therefore give them with pleasure.

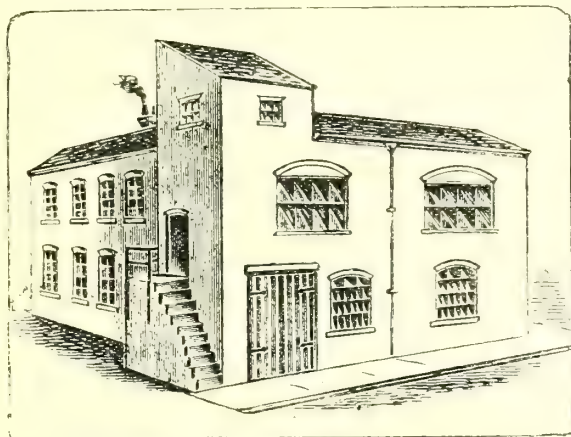
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**DAISY, Limited, MAMMOTH WORKS, LEEDS.**

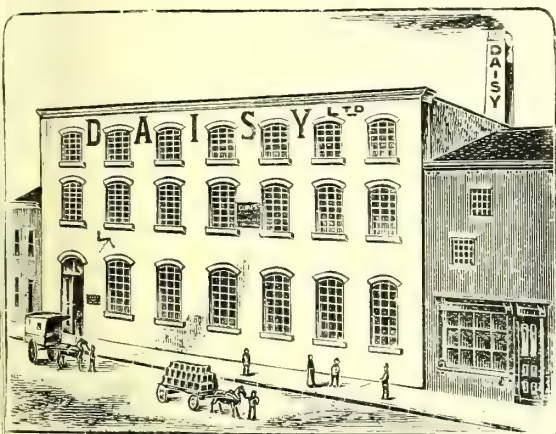
Telephones—1990 and 1360.

Telegrams—"Daisy Leeds."

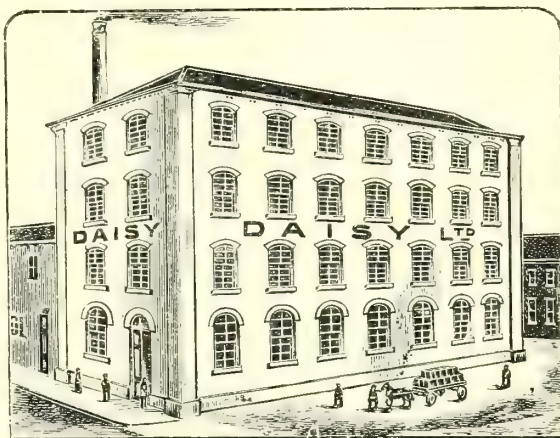




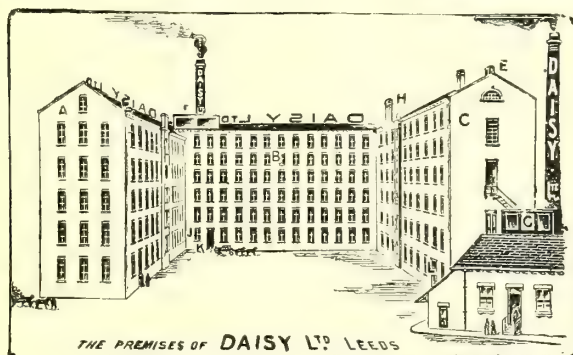
The Daisy Factory in 1894.



The Daisy Factory in 1895.



The Daisy Factory in 1897.



The present Factory, 1900, Mammoth Works, Leeds, built by Messrs. Marshall at a cost of, £40,000, contains 10,000 square feet of fireproof floorage, 3 hoists, 54 w.c.'s, and is lighted through 500 windows of enormous size. Within 10 minutes of the heart of the City, they are without doubt the finest suite of fireproof mills in Leeds.

My friends consider it remarkable how Daisy has grown; yet, on closer acquaintance, it is not surprising.

You can sell a sample Daisy for 1d.; five Daisies for 4d.; ten Daisies for 7½d.; and twenty Daisies for 13½d.; and yet get 100% profit on the bulk of the sales. P.A.T.A. protected, unique displays to draw crowds to the window, handsome art chromos and plenty of printed matter on application to

**DAISY, Limited,**

Telephones—1990 and 1360.

**MAMMOTH  
WORKS,**

**LEEDS.**

Telegrams—"Daisy Leeds."

# WHAT THE CHEMISTS SAY OF DAISY.

*The Chemist and Druggist* very recently asked the question, "Which is the most popular proprietary article?" The voting in this competition placed DAISY at the Top of the Poll, with a magnificent majority of three times that of the nearest competitor (B \* E \* H \* M \* P \* L \* S), and obtained more votes than all the others put together.

Furthermore, 12 months ago *The Chemist and Druggist*, the leading paper of the Trade, asked its readers to "Vote for the article which has your best wishes." The reply was a decided one: it placed the Daisy Headache Cure at the Top of the Poll! with over 100 per cent. majority.

No similar line was even mentioned in the list given.

---

**DAISY, Limited, MAMMOTH WORKS, LEEDS.**

Telephones—1990 and 1360.

Telegrams—"Daisy Leeds."

*See preceding 3 pages.*



# BURGOYNE, BURBIDGES & CO.

Manufacturing Chemists,

WHOLESALE AND EXPORT DRUGGISTS.

*Contractors to Her Majesty's Government.*

## HIGH-CLASS PHARMACEUTICAL PREPARATIONS.

### CONCENTRATED FRUIT AND SOLUBLE ESSENCES,

For Mineral-water Manufacturers and Confectioners.

### LIQUID EXTRACTS, TINCTURES, AND GALENICAL CONCENTRATIONS,

Made in our own Laboratories, and Shipped under Bond.

### VETERINARY MEDICINES & APPLIANCES.

### ANTITOXIC SERUMS

For Plague, Diphtheria, Erysipelas, Tetanus, Typhoid, &c. Of the highest purity, and in sterile condition.

### CHLOROBROM.

The Hypnotic and Specific for Seasickness.

### XEROFORM.

The Ideal Substitute for Iodoform.

### ZOTAL.

The new Phenol Disinfectant & Deodoriser.

### GUAIACOL CARBONATE.

The Remedy for Phthysical Affections.

## PHOTOGRAPHIC CHEMICALS AND REQUISITES

Of every description.

## APPARATUS OF ALL KINDS

For Bacteriological Research.

## PERFUMES,

And every requisite for Toilet use.

## INFANTS' AND INVALIDS' FOOD,

Cooked and ready for immediate use.

## COATED PILLS, LOZENGES, AND PASTILLES,

Prepared according to the British Pharmacopœia and from special formulæ of the various Hospitals.

## "RED CROSS" LINT AND ANTISEPTIC DRESSINGS.

## TEST CABINETS, URINOMETERS,

And all Accessories for Urine Analysis.

## DRUGGISTS' SUNDRIES

Of every description.

## SURGICAL INSTRUMENTS AND APPLIANCES

Of the most modern introduction.

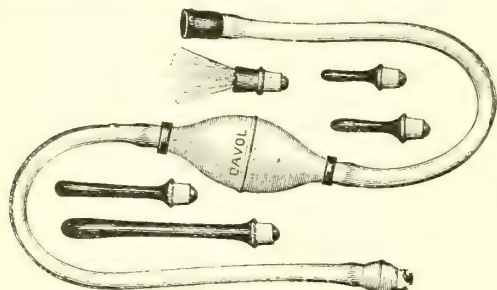
## PHYSIOLOGICAL AND ANALYTICAL TESTS CONDUCTED.

*Prices Current in all Languages, Literature, and Samples on application.*

Offices, Warehouse, and Chemical Laboratory: 16 COLEMAN ST., LONDON, E.C.  
Analytical Laboratory and Bonded Warehouse: KING EDWARD ST., LONDON, E.

## DAYOL'S HOUSEHOLD SYRINGES.

Recommended by the Medical Fraternity.

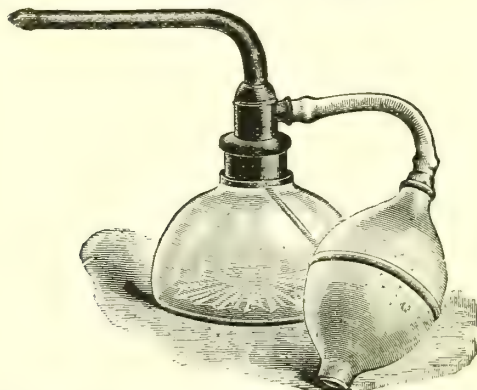


Made of Pure Rubber with Hard Rubber Pipes. Are conceded to be the best, cleanest, and most perfect Syringes on the market, as they have no screw threads or washers to get out of order and thus become defective; nor any metal fittings to become corroded, and which are so dangerous in use.

*The Valves are secured and cannot be lost, therefore ensuring efficiency at all times.*

## DAYOL'S MAGIC ATOMIZERS.

CONTINUOUS SPRAY.



For the Toilet; also for Throat and Nasal Applications, and employment in the Arts. **Made with Metal and Hard Rubber Tubes.** Are unequalled for Quality, Efficiency, and Durability, great care being taken in their manufacture to have a first-class instrument in every respect.

We Manufacture a Complete Line of FOUNTAIN and BULB SYRINGES in the various grades,

— AND —

**Fine Rubber Goods Generally**

*For the Druggists' & Surgical Trade.*

## DAYOL RUBBER CO.

PROVIDENCE, R.I., U.S.A.

WRITE FOR NEW ILLUSTRATED CATALOGUE.

*Unaltered in Size and Dose.*

## NITROGLYCERIN TABLETS.

**MARTINDALE,**

The Original Manufacturer.

**MARTINDALE'S CAPSULES OF  
AMYL NITRITE.**

**ERYTHROL NITRATE TABLETS.**

High Class Galenical  
Preparations.

**RARER ALKALOIDS & SYNTHETIC PRODUCTS**

PRICE, Post Free, 6/6.

ANTISEPTIC TABLETS, for use  
with the Spittoon, 1/-



SPITTOON  
AND BOTTLE  
OF  
TABLETS  
COMPLETE.  
Post Free,

7/3.

### PORTABLE SPITTOON.

For Phthical Sufferers and others. Easily carried in the outside or inside Breast-pocket. Made entirely of non-corrosive white metal. Inoffensive in appearance.

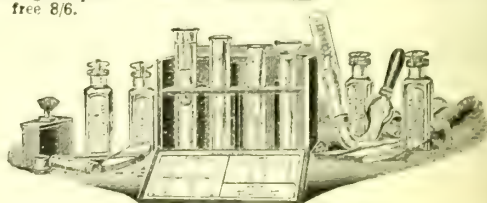
To Clean may be Boiled with impunity.

PRICE  
with Reagents ready  
for use, 17/6.  
Packing and post  
free 18/-  
Set of Reagents for  
Stock, 7/6.  
Packing and post  
free 8/6.



Complete, post free  
**£1 6 0.**

For Export, best supplied  
complete, 25/-  
Packing and carriage  
extra.



### URINE TEST CASE.

A compact Mahogany Case, 6 in. by 2½ in. by 4 in., containing the apparatus and reagents requisite for the qualitative and quantitative examination of URINE for ALBUMIN, GLUCOSE, and UREA.

**W. MARTINDALE,**

10 New Cavendish Street, LONDON, W.



# DRUGGISTS' SUNDRIES.

**Complete Stock & Prompt  
Execution of Orders.**

**Ask for Price List.**

**Evans, Sons & Co.**  
**LIVERPOOL.**

London :  
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EVANS AND SONS, LTD.

# PILL BOXES.

The Undersigned can offer to  
advantage all descriptions.

**SEE PRICE LISTS.**

Special Quotations for Quantity.

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EVANS, LESCHER & WEBB,  
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## ESCHMANN BROS. & WALSH, LONDON,

INVENTORS AND MANUFACTURERS OF THE

**SOFT SILK FLEXIBLE CATHETER, GUARANTEED WITH WOVEN EYES.**

To be had of all Surgical  
Instrument Makers  
and Wholesale Houses.



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## SOME OF OUR SALEABLE PENNY LINES.



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SOUTHWARK,

# P. BEIERSDORF & CO.

Hamburg-Eimsbüttel, manufacturing chemists of:

## BEIERSDORF's Guttapercha-Plastermulls,

according to Dr. Unna:

Medicated plasters of the exactest division and of the highest concentration, spread on an impermeable layer of guttapercha, especially for dermatological purposes.

## BEIERSDORF's Paraplasts, according to Dr. Unna:

Impervious rubber plasters, glossy like silk, and closely resembling the tints of the skin in appearance. Use and indication analogous to that of Guttapercha Plastermulls; similar in composition.

## BEIERSDORF's Salvemulls, according to Dr. Unna:

Ointments in most accurate doses, spread either on one or both sides of absorbent muslin, for treatment of secretory eczema

## BEIERSDORF's Tricoplasts, according to Dr. Arning:

Plasters spread on tricot, an exceptionally pliant and permeable tissue; they are especially useful in cases of subacute and chronic eczema.

## BEIERSDORF's Rubber Adhesive Plasters

in Pieces and on Spools.

Yellow and white with oxide of zinc, non-irritating and very adhesive.

## BEIERSDORF's Medicated and Porous Rubber Plasters.

Belladonna, Capsicum, Strengthening, Parache fortificante.

## BEIERSDORF's Mercolint Bib (Chest Protector),

according to Dr. Blaschko.

Providing a very convenient method for the therapeutic employment of mercury; consists of a felt-like fabric, which neither adheres to, nor greases the skin. It contains finely divided metallic mercury, which evaporates when worn and is thus absorbed by the patient. Bib No. 1 contains 10 grammes; No. 2 contains 25 grammes; and No. 3 contains 50 grammes of Mercury.

## BEIERSDORF's Aromatic Potassium Chlorate Tooth Paste.

For use in sundry morbid conditions of the cavity of the mouth, notably in cases of "foetor ex ore" and mercurial stomatitis; in collapsible tubes.

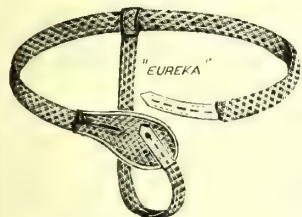
Lists and Samples on application.



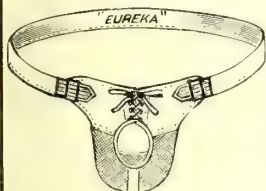
AGENTS: for England, HUGO LORENZ, 7-8 Idol Lane, London, E.C.  
for the U.S.A., LEHN & FINK, New York.



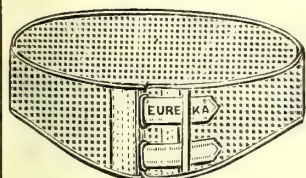
# VINCENT WOOD



"ELBAHSAW."



THE CARLTON.



CELLULAR BELTS, 24/- dozen.

Has a large number of New Inventions which should be seen and Stocked by every Druggist and Surgical House in the trade.

**MATERIALS AND PATTERNS ARE PROTECTED.  
TRADE MARKS REGISTERED AND ARTICLES PATENTED.**

The "Elbahsaw" Truss is a combination and an ideal support. The casing, which is made of the celebrated (Aertex) Cellular Cloth, takes off and is washable and the Spring and Pad specially prepared, can be used in the bath.

Price Single, 36/- Double, 48/- per dozen. Extra covers, 6/- dozen extra

The Eureka Soft Band Truss. No circular spring. A great boon to those with tender skin and who cannot bear pressure on the loins. Price from 27/- per dozen.

Eureka Cellular Aertex Cloth Suspensory Bandages. The best selling line in the market. One on card for display as sketch in window.

Price, White, 6/6, Ecu or Khaki shade, 8/6 dozen.

The New Carlton Adjustable Suspensory Bandages. The front laced up enabling perfect pressure and support of the genital organs.

Price in Silk, 24/- per dozen in Cotton, 15/-

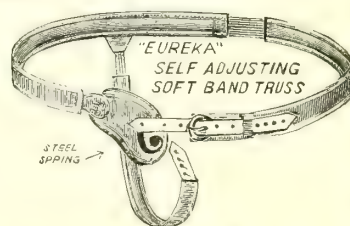
**ALSO A RANGE OF GOODS CARDED FOR WINDOW DISPLAY.**

REMEMBER—Place no orders with any house until you have seen my samples, procurable from every Wholesale House or from Patentee—

## VINCENT WOOD,

4 Albion Place, Blackfriars Bridge, London, S.E.

FACTORIES AT—  
NOTTINGHAM, LONDON, AND CARLTON.



## SOMETHING NEW AND SALEABLE.

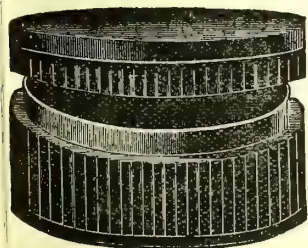
### AUSTIN & CO.

Are now making Patent Airtight Card Boxes for Violet Powder, Fullers' Earth, Baking Powder, Shaving Sticks, and other purposes. These goods are effective in appearance, strong and thoroughly reliable, ends will not fall out, and all Boxes are uniform in size. A 6d. line looks worth a 1/- when put up in these Boxes. Attractiveness, security, and cheapness are the main features.

Can be had through Messrs. MAW, SON & THOMPSON and other leading Wholesale Houses only.

Messrs. A. & CO. respectfully beg to inform the Retail Trade that they cannot under any circumstances supply other than through Wholesale Houses.

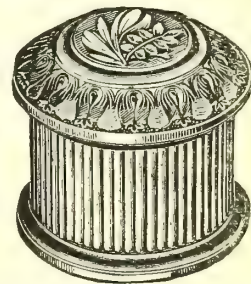
## "STIPENDUM" CORK STOPPERS IN ALL SIZES.



**"STIPENDUM" Puff Boxes,**  
Artistically decorated in various effects.

**"STIPENDUM" GREASE-PROOF COVERED POTS.**  
In Terra Cotta, Chocolate, and Black.

These Grease-proof Covered Pots have perfectly-fitting lids, are practically unbreakable, and the only articles really answering the purpose intended.

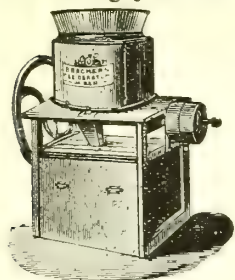


To be had of all Druggists' Sundriesmen. Wholesale only of

THE "STIPENDUM" STOPPER CO., LIM., 47 LAMB'S CONDUIT STREET, W.C.

## SIFTER & MIXER (BRACHER'S PATENT) THE DESIDERATUM.

For mixing powders of any description there is nothing to equal it for speed and thoroughness. About 12,000 are in constant use throughout the World, from 7 lb. capacity



Price 27/6

up to 1 cwt. size for hand and power as per Illustration.

Sole Maker and Owner of the above,

**WILLIAM NEWMAN, WINCANTON.**

THE "UNIQUE"

IMPORTANT TO  
WHOLESALE & RETAIL CHEMISTS.

**COD-LIVER OIL  
MECHANICAL EMULSIFIER,**

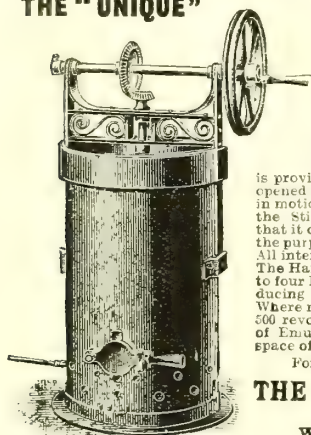
*Fitted with Horne's Improved  
Portable Stirring Apparatus.*

Close-fitting Cover, with Spring fixing attachment. The hole in lid is provided with Screw-plug, which can be opened for charging whilst the apparatus is in motion. After the Emulsion is drawn off, the Stirring Apparatus is constructed so that it can be removed at one operation for the purpose of cleansing the pan and fittings. All internal parts are coated with pure tin. The Hand Machines are speeded to run three to four hundred revolutions per minute, producing an Emulsion in about 15 minutes. Where motive power is used, and a speed of 500 revs. can be obtained, a higher grade of Emulsion can be secured in a shorter space of time.

For prices and particulars apply to

**THE ARCHIMEDEAN CO.**

LEAMINGTON,  
WARWICKSHIRE, ENGL.



## FEEDING BOTTLES.

The Undersigned can offer to advantage all descriptions.

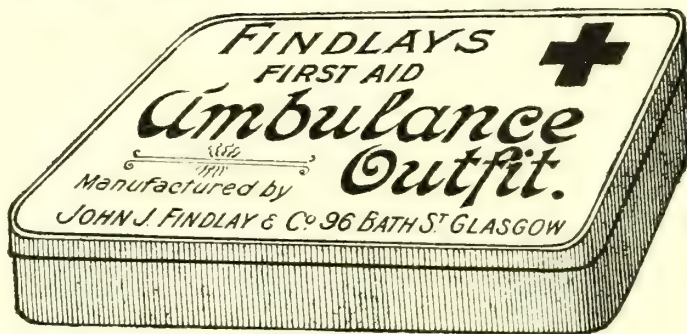
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Special Quotations for Quantity.

**EVANS, SONS & CO.**  
**LIVERPOOL.**

EVANS, LESCHER & WEBB, EVANS AND SONS, LD.  
London. Canada & United States.

## The Pocket Ambulance Outfit.



FINDLAY'S FIRST-AID AMBULANCE OUTFIT consists of Antiseptic Gauze, Adhesive Plaster, Wood Wool Pad Triangle Bandage, and Safety Pins. Contained in a neat decorated tin box measuring  $5\frac{1}{2} \times 3\frac{1}{2} \times 1$  in. It is very highly recommended by Ambulance Surgeons on account of its usefulness, combined with moderate cost. Very handy for Cyclists, &c., &c.

Price 10/- per Doz. net.

Discount for Quantities.

### CRÉPE RUBBERLESS ELASTIC BANDAGE.

2 inches, 10/- ...  $2\frac{1}{2}$  inches, 12/- ... 3 inches, 15/- ...  $3\frac{1}{2}$  inches, 18/- per Doz.  
EACH BANDAGE IN A BOX. DISCOUNT FOR QUANTITIES.

### THE "ST. MUNGO" RUBBERLESS ELASTIC BANDAGE.

This is **not** a Crêpe Bandage, but has much more body, and is at the same time remarkably light and comfortable to wear.

2 inches, 7/- ...  $2\frac{1}{2}$  inches, 8/- ... 3 inches, 9/- ... 4 inches, 12/- per Doz.  
EACH BANDAGE IN A BOX. DISCOUNT FOR QUANTITIES.

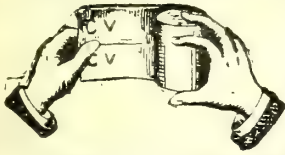
PRICE LIST OF SURGICAL DRESSINGS & APPLIANCES ON APPLICATION.

**JOHN J. FINDLAY & CO.** Surgical Bandage & Dressing Manufacturers, **96 BATH ST., GLASGOW**



**WARNING.**

Owing to the success of my "EUREKA" CREPE VELPEAU RUBBERLESS POROUS BANDAGES, the trade are being offered spurious and foreign made imitations. The only way to avoid being thus victimised is to distinctly ask for the "EUREKA" make. If you have been induced to purchase any of these imitations, purporting to be mine, return them at once, and see that the correct ones bear my trade mark, "EUREKA," Regtd. No. 228376.



	2 in.	2½ in.	3 in.	8 in.	11 in.
Price per doz. Rolls,	12/-	15/-	18/-	36/-	54/-
2nd quality	9/-	12/-	15/-	—	—

VINCENT WOOD, 4 ALBION PLACE, BLACKFRIARS BRIDGE, S.E.

**PARAFFINUM MOLLE**

IMPORTERS AND SOLE AGENTS FOR AMERICAN

Yellow and White Petroleum Jellies, B.P.,  
Refined by the Union Petroleum Company,  
Philadelphia, U.S.A.

All our Petroleum Jellies are pure American. Chemists therefore should ask for Hatrick's Petroleum Jellies.

**JAMES L. HATRICK & CO., LIM.**

82 Turnmill Street (next Booth's Distillery), E.C.

**ENEMAS.**

The Undersigned can offer to  
advantage all descriptions

SEE PRICE LISTS.

Special Quotations for Quantity.

**EVANS, SONS & CO.**  
**LIVERPOOL.**

EVANS, LESCHER & WEBB, EVANS AND SONS, LD.  
London. Canada & United States.

REGISTERED  
TRADE MARK

**VIMULE**

REGISTERED  
TRADE MARK

**SOLUBLE TABLETS**

PREVIOUSLY ADVERTISED AS

**LAMBERT'S SOLUBLE QUININE TABLETS.**

PERFECTLY  
PREPARED.



ABSOLUTELY  
RELIABLE.  
SALE UPWARDS OF  
£,000,000.

These Tablets are manufactured by us of the best materials procurable. We guarantee every one to be of accurate proportions, and can with confidence recommend them to the trade as one of the best ever introduced.

They are packed in specially neat metal boxes of 1 doz., and sealed with our Registered Label, without which they are not genuine.

Our method of packing particularly adapts them for exportation. Being practically air-tight they will keep in perfect condition for a long period, and liability to injury by variation of climate is reduced to a minimum.

Advertised to retail at 2/- per box of 1 dozen. 5/- for three boxes 9/6 for six boxes. 17/- for 12 boxes.

**Trade Price.**

12/6 net per dozen boxes of 1 dozen each.

Single boxes 1/3, including postage.

Orders of ½ doz. boxes and upwards sent post free.

Can be obtained through any wholesale house.

PERFECTLY  
PREPARED.

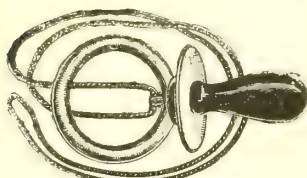
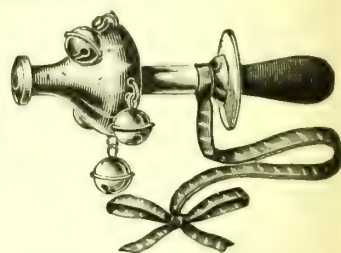
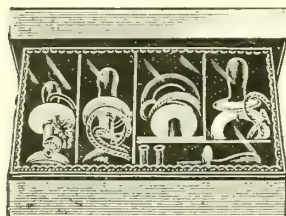


TRADE PRICES  
MODERATE.  
SALE UPWARDS OF  
£,000,000.

**A. LAMBERT & CO., 16 DALSTON LANE, LONDON, N.E.**

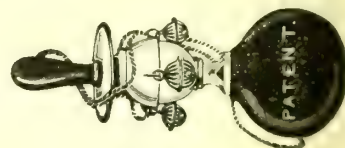
# ORDERED TO THE FRONT. HOLDFAST PACIFIERS AND BOTTLE UNIONS. NO MORE CHILDREN CHOKED.

REGISTERED TRADE MARK

73 B. Sp. 1d. Line.  
Carded 1 dozen.106 B. 2/- Line. Trumpet and Bells.  
Best White Metal each in a G.T. Box.106 B. 2/6 Line. G.T. Box.  
Contains Best Pacifiers and  
Bottle Unions.

LOOSE CAP

107 b. 1d. Line Patent Food Regulator. 1 dozen cards.

67 B. 1/- Line.  
Ball, Whistle, and Bells, each in a Box.

**MORE THAN ONE HUNDRED LINES, from 1d. to 2s. 6d.**

The advantage of the Holdfast Pacifier and Bottle Unions is that they cannot be pulled apart, and the Food Regulators cannot possibly be displaced, and having a loose cap will not cut the tube.

Send P.O. for 5s. or 10s. and I will forward you choice selection, post free.

PATENTEE AND MANUFACTURER—

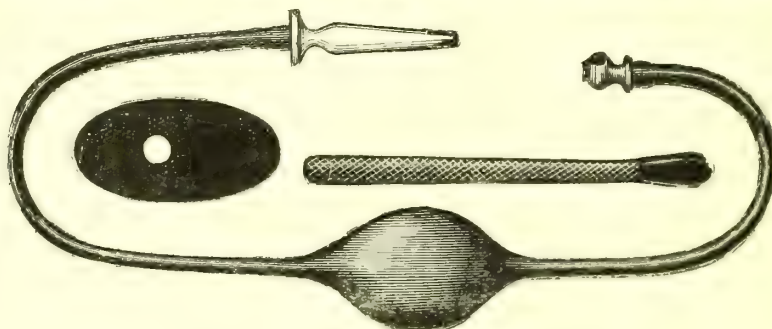
**A. S. CARTWRIGHT, 75 Ford Street, HOCKLEY, BIRMINGHAM.**

## THE 'EMPIRE' ENEMA.

17/-  
NET.

PER DOZ.

UNPOLISHED.



18/-  
NET.

PER DOZ.

POLISHED.

This is a FULL-SIZED Enema, made of Vulcanized Rubber, and has two important qualities never before combined, except in high-priced Enemas, viz.:

**IT WILL NOT GET STICKY**

*In hot weather, and*

**IT WILL NOT GET HARD**

*in cold weather.*

**WE GUARANTEE THEM FOR TWO YEARS.**

We also supply Druggists' Sundries in great variety, Stockings, Hot-water Bottles, Combs, Sponge Bags, Syringes, Catheters, Trusses, Elastic and Waterproof Goods of all kinds

Owing to the continued rise in raw material we are obliged to notify a small advance in prices of a good many of our articles. Particulars of this advance have been posted to all Chemists on our books, and will be sent to others on application.

**OUR GOODS ARE RIGHT AND PRICES LOW.**

WRITE FOR ILLUSTRATED CATALOGUE—POST FREE.

**BURGE, WARREN & RIDGLEY, 91 & 92 Great Saffron Hill, LONDON, E.C.**

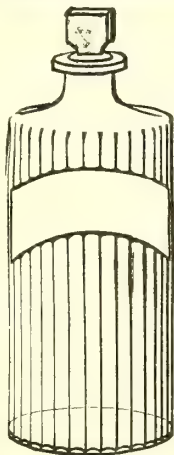


# TOOGOOD'S WHITE GLASS POISON SHOP ROUNDS

(Conforming to the Poison Regulations).

Extract from Regulations—

**b.** Poisons to be kept in a bottle or vessel, **distinguishable by touch** from the bottle or vessel in which ordinary articles are kept in the same warehouse, shop, or dispensary.



SIZES:—

	8	16	20	32	40	48	oz.
Height to Shoulder	4	5	5½	6½	7	7½	in.
Height to top of Stopper	5½	7½	7½	9	10½	10½	in.
N.M.	8/-	11/-	12/-	15/-	16/-	18/-	doz.
W.M.	9/-	12/-	13/-	16/-	17/-	19/-	"

LABELLING IN GOLD, 3/6 doz.

## WILLIAM TOOGOOD,

Burlington Buildings, Heddon Street. Regent Street. LONDON. W

### GLASS MEASURES.

Bottles,  
Boat Feeders,  
Eye Baths,  
Flasks,  
Syringes,  
Test Tubes,  
Trial Jars,



Vials,  
Chemical and  
Surgical  
Glassware  
of every description.  
Wholesale and  
Export only.

SAMPLES AND PRICE LISTS ON APPLICATION.

A. W. QUAINANCE, 73 BRUNSWICK CLOSE, OLDERKENWELL, LONDON, E.C.

### DISPENSING BOTTLES.

THE NORTH LONDON GLASS BOTTLE COMPANY

(I. ISAACS & CO., Proprietors)

Beg to inform the Trade that they have made a further reduction in the price of their Bottles, as follows:—

The NEW SHAPE FLAT BOTTLES, with rounded edges, plain or graduated—

8 & 4 oz. . . 9/- per gross. | 10 & 12 oz. . . 15/- per gross.

6 „ 8 „ . . 10/- „ | 16 „ . . 18/- „

WHITE MOULDED PHIALS, plain or graduated Teaspoons—

1 oz. . . 3/8 per gross. | 1½ oz. . . 4/9 per gross.

1 „ . . 4/- „ | 2 „ . . 5/6 „

PLEASE NOTE.

Six gross and upwards, assorted or otherwise, are carriage paid to any address in England; smaller quantities not carriage paid.

I. ISAACS & CO., Glass Bottle Manufacturers,  
106 MIDLAND ROAD, ST. PANCRAS, LONDON.

Established 50 years.

Bankers—London and Westminster Bank.

## BOTTLES.

The Undersigned can offer to  
advantage all descriptions.

SEE PRICE LISTS.

Special Quotations for Quantity.

## EVANS, SONS & CO.

LIVERPOOL.

EVANS, LESCHER & WEBB,  
London.

EVANS AND SONS, LD.  
Canada & United States.

# THE SUSPENSORY BANDAGE

TO RECOMMEND IS

## The "SYRACUSE,"

With SELF-ADJUSTING LOOP at back of Pouch.

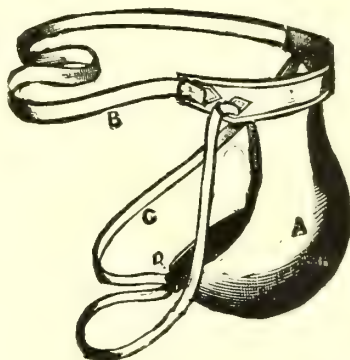
(PATENTED IN ENGLAND.)

HAS THE  
**LARGEST SALE**  
OF ANY  
**SUSPENSORY BANDAGE**  
IN THE STATES.

3 Sizes, Large, Medium, & Small.

Made in Seven Qualities, to  
suit all Markets.

Each Bandage is boxed separately  
with Printed Guarantee.



Each Bandage bears a  
Guarantee to give satis-  
faction to Wearer, or  
money returned at our  
expense.

### COTTON POUCHES.

Nos. 10	16	21
9/6	12/-	18/- per doz.

### SILK POUCHES.

Nos. 26	31	34	36
24/-	30/-	48/-	72/- per doz.

We call attention to the fact that our Bandages are advertised in all the leading Athletic papers, and are largely used by Athletes of all kinds. We would strongly recommend all Chemists who require a first-rate Bandage, and who wish to give satisfaction to their Customers, to hold stock, which will enable them to supply our Bandages when asked for.

May be obtained from all leading Druggists' Sundries Houses throughout the Country, or from the

**WELLS MANUFACTURING CO. (H. C. Quelch), LUDGATE SQUARE, LONDON, E.C.**

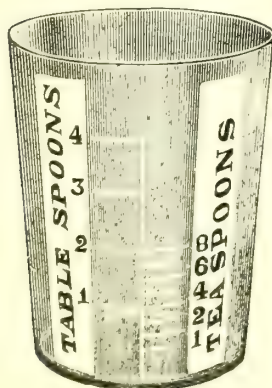
## TO CLINICAL THERMOMETER BUYERS, SHIPPERS, &c.

**DENTON'S CLINICAL THERMOMETERS** have had a constantly-increasing sale for upwards of a quarter of a century. They are guaranteed the best English make. There are various patterns to choose from. They are reliable, accurate, and neat. One trial is sufficient to recommend them. They are in use all over the world. All standard patterns kept in stock (special kinds and scales made to order). Our latest pattern, the "Quickset," can be "set" with only one or two shakes, thus avoiding the trouble of swinging the arm for five minutes. They are the greatest boon on the market for Nurses, as they save fatigue.

**S. G. DENTON** (Maker to the Government).

Correspondence  
Invited.

25a Hatton Garden, LONDON.



"CLEAR LETTER"  
MEDICINE TUMBLERS.

**SAMPLES  
POST FREE**

upon receipt of Trade Card.

**F. H. TAYLOR & CO.**

Errol St., LONDON, E.C.  
(Established 1875).

Manufacturers of GRADUATED GLASS  
MEASURES of every description.

## LINT, BANDAGES, & COTTON WOOL.

The Undersigned can offer to  
advantage all descriptions.

**SEE PRICE LISTS.**

Special Quotations for Quantity.

**EVANS, SONS & CO**  
**LIVERPOOL.**

EVANS, LESCHER & WEBB,  
London.

EVANS AND SONS, L.  
Canada & United States.

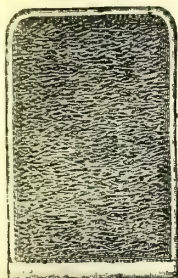




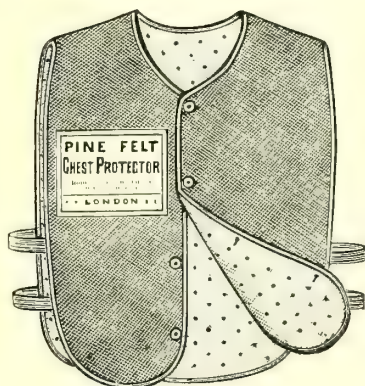
Telegrams—"SOLPORT, LONDON."

# SOLPORT BROTHERS,

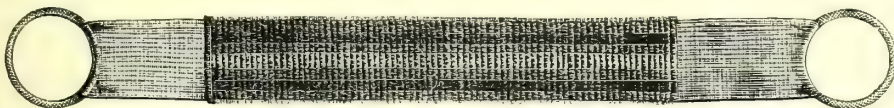
66 SHAFTESBURY STREET,  
New North Road, LONDON, N.,  
MANUFACTURERS (WHOLESALE AND EXPORT).



ILLUSTRATED PRICE LISTS

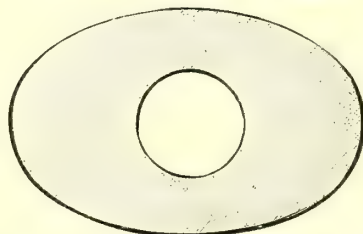
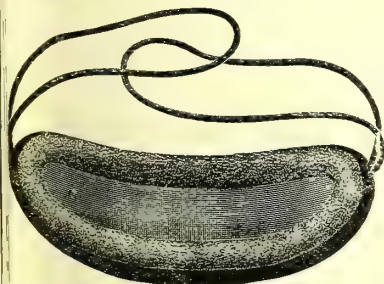


SENT ON APPLICATION.



WHOLESALE BUYERS AND SHIPPERS

SHOULD WRITE FOR OUR ILLUSTRATED PRICE LISTS.





**53 Highest Awards over all Competitors  
throughout the World.**

# SEABURY & JOHNSON,

ORIGINAL MANUFACTURERS OF

**PHARMACOPŒIAL AND SURGICAL PLASTERS**

NEW YORK and LONDON.

IN RUBBER COMBINATION,

**ANTISEPTIC DRESSINGS AND ABSORBENTS, &c.**

IN RUBBER-COMBINATION BASE.

**Bandages, Oiled Silk and Muslin, Ligatures, and Surgical Dressings  
OF EVERY DESCRIPTION.**

## SEABURY'S BELLADONNA PLASTERS

ARE GUARANTEED TO BE PREPARED WITH

**EXTRACT ATROPA BELLADONNA ROOT, AND ARE GUARANTEED B.P. STRENGTH.**

### *Report of "THE LANCET," December 3, 1898.*

"SEABURY & JOHNSON'S BELLADONNA PLASTERS are not only satisfactory on account of the excellence of the rubber basis, but—of more importance still—are standardised in regard to the constituents of Belladonna, the yield of alkaloids on analysis being just slightly over half per cent. in accordance with pharmacopœial requirements. These Plasters may therefore be relied upon."

### *Report of "THE HOSPITAL," October 21, 1899.*

In an investigation undertaken by the *Hospital* on Belladonna Plasters in January 1899, it was shown that SEABURY & JOHNSON'S were the only reliable Plasters, being fully up to B.P. strength. A full report of this investigation was published in the *Hospital* of 21st October, 1899, p 44.

### *Extract from "THE CHEMIST & DRUGGIST," November 18, 1899.*

In commenting upon "Weak Belladonna Plasters," page 830, the following advice is given:—

"... Meanwhile, chemists should be careful to obtain some kind of guarantee from the makers that the Plasters are of B.P. Alkaloidal strength, and so protect themselves against the consequences of prosecution. . . ."

**EXPERIENCE PROVES THEIR IMMENSE SUPERIORITY OVER ANY OTHERS.**

**When ordering specify "SEABURY'S."**

SOLE DEPOT FOR GREAT BRITAIN AND COLONIES:—

**SEABURY & JOHNSON, 31 & 32 Snow Hill, LONDON, E.C**



# WHOLESALE PRICE LIST

PRICES SUBJECT TO MARKET FLUCTUATIONS.

SPECIALITIES!

NOVELTIES!

Hamburg 1889.



Silver Medal.  
Industrial Exposition.



BRONZE MEDAL  
FOR CHINOSOL

Berlin 1896.



Silver Medal.  
German Colonial Exposition.

Lubeck 1895.



Great Silver Medal.  
Price of Honor presented by the Chamber  
of Commerce.



SANITARY CONGRESS  
LEEDS, 1897.  
BIRMINGHAM, 1898.  
SOUTHAMPTON 1899.

Lubeck 1895.



Gold Medal.  
German Scandinavian Exposition of Commerce  
and Industry.

## FRANZ FRITZSCHE & Co. HAMBURG.

DISTILLERS and MANUFACTURERS

of  
ESSENTIAL OILS,  
SYNTHETICAL PRODUCTS FOR PERFUMERY  
and  
ESSENCES.

Specialities:

Essential Oils, Essences, Chemical and  
Synthetical Products

for  
PERFUMERS, SOAPMAKERS  
AND  
LIQUORISTS.

Essential Oils  
of

Amber,  
Anis russ. rectified,  
Bay, Eitter-Almonds,  
Cananga, Caraway,  
Cardamom, Cedarwood,  
Cinnamon,  
Cloves, Coriander,  
Fennel sweet,  
Geranium, Hops,  
Lilac (Syringa), Linaloe  
Mirbane, Narcissus,  
Opoponax, Orrisroot,  
Palmarosa, Patchouli,  
Peppermint, Sandalwood,  
Sassafras, Styrax,  
Wintergreen etc.

Anethol, Aubépine,  
Borneol,  
Chinoline,  
Citral, Eucalyptol,  
Eugenol, Geraniol,  
Hyacinthine, Lilacine,  
Linalool, Menthol, Muguet,  
Myrtol, Neroline, Oeillet,  
Oxychinoline,  
Safrol, Terpeneol,  
Thymen, Thymol.

Compound essential Oils  
for  
Extracts and Soaps.

Colours  
for  
Extracts and Liquors.

TERMS:

All goods delivered f. o. b. Hamburg, packages included; 30 days cash less 2 1/2 % discount.

Telegrams: „Rosolic, London“ — „Esencias, Hamburg“.  
Code: **ABC 4th. Ed.**

*Sole Agent for Great Britain and Colonies:*  
**F. ARENBERG, London E.C.**  
*9 Sarage Gardens.*

## Essential Oils.

Oil Almonds, bitter, extrafine	14/— lb
» » free from Prussic Acid	17/6 »
» » artificial, prime	1/10 »
» » free from chlorine	4/6 »
» Amber, crude	5 d »
» » rectified	—/8 »
» Angelica	30/— »
» Anise Seed, Russian rectified	6/8 »
» » Anethol pure	8/— »
» » China	6/9 »
» Balsam Peru	20/— »
» » Tolu	9/— oz
» Basil	3/6 »
» Bay Leaves, St. Thomas, genuine	13/6 lb
» Bergamott, extrafine	8/6 »
» » rect. white	9/— »
» Birch Tar	5 d
» » rect.	1/2 »
» » extra	9 d »
» Buchu-Leaves	2/3 oz
» Cajeput, green	2/6 lb
» » rectif., white	3/— »
» Calamus	5/— »
» Camphor, rectif. light	—/— cwt.
» » » heavy, white	20/— »
» Cananga Java, extrafine	25/— lb
» » » Indian	14/— »
» Caraway Seed, twice rectified	6/— »
» » extra strong (Carvol)	8/3 »
» Cardamom, Ceylon	6/6 oz
» Cascarilla	2/3 »
» Cassia, pure, filtered	5/6 lb
» Cedarwood, extrafine, Florida	1/2 »
» Celery	20/— »
» Chamomile, genuine, blue	7/— oz
» » Roman	2/6 oz
» Cherry-Laurel	13/6 lb
» Cinnamon, Ceylon, extrafine	32/— »
» Citronella, Native, prime	1/2 »
» Cloves	2/9 »
» » rectif.	3/— »
» » drawn from stems	2/3 »
» » light (without Eugenol)	1/2 »
» Cognac (Grape) genuine, green	50/— »
» » artificial	6/— »
» Copaiba, Para	3/— »
» Coriander Seed	13/6 »
» Cubebs	4/— »
» Cumin	8/— »
» Dillseed	10/6 »
» Elemi	4/— »
» Estragon	2/3 oz
» Eucalyptus, globulus, prime	2/3 lb
» Fennel Seed, bitter	—/8 »
» » sweet	3/6 »
» Galangal	38/— »
» Geranium, African, extrafine	14/6 »
» » French, extrafine	27/— »
» » Réunion »	14/— »
» » Turkish » (Palmarosa)	10/— »
» » Indian (Gingergrass)	5/— »
» » extrafine	13/— »
» Ginger	13/— »
» Guajac Wood	7/— »
» Hops	110/— »

Pure natural products.

The best obtainable quality.

Recommended for soaps. Absolutely free from chlorine

Special prices for large quantities.

Distilled from the root.

Melting point 17° C. B. P. 1898.

Melting point 21° C. Special prices for large quantities

Recommended for toilet soaps.

Fresh supplies just come in.

Distilled from fresh leaves.

Recipe for finest Bay Rum supplied on application  
Containing 38—40% Ester.

Called Russian leather Oil.

Specially recommended for toilet soaps.

B. P. 1898.

Spec. grav. 0,910—0,920; without stock.

Spec. grav. 0,970—0,980.

Direct importation.

From dutch seed; spec. grav. 0,910. B. P. 1898.

Spec. grav. 0,965; soluble in 50% alcohol.

Guaranteed pure.

Containing 80—85% Cinnamic Aldehyde.

Special prices for large quantities.

B. P. 1898.

Guaranteed pure. B. P. 1898.

Best selected quality; soluble in 10 parts of 80% alc

B. P. 1898.

The market is somewhat easier.

Extensively used for laundry soaps.

The very strongest quality.

Soluble in 3 parts of 70% alcohol. B. P. 1898.

B. P. 1898.

B. P. 1898.

Guaranteed 60% of Eucalyptol.

Largely used for soaps. Special prices for large quantities

Soluble in 3 parts of 70% alcohol.

Direct connections enable us to quote yet at such low prices as  
we even can reduce them yet when taking larger quantities

Marked steady with strong demand.

Specially adapted for Rose soaps.

With finest tea-flavor; very suitable for toilet soaps.

For Hop Bitters and brewers use; distilled from finest

Please note that all our gums are made up in packages bearing our trade mark (three owls) upon labels and capsules.  
Our "Three Owls Brand" is known for unvalued qualities.



## Fruit Essences.

For flavouring all kinds of Confectionary. Ices, Jellies, Drinks, Aerated waters, Liqueurs, Cordials &c.

Unrivalled for purity, strength and trueness of flavour!

Essence of:

Apple .....  
 Apricot .....  
 Banana .....  
 Blackberry .....  
 Cherry .....  
 Currant, black .....  
     » red or white .....  
 Ginger .....  
 Gooseberry .....  
 Greengage .....  
 Grenadine .....  
 Lemon .....  
 Melon .....  
 Nectarine .....  
 Orange .....  
 Peach .....  
 Pear .....  
 Pine Apple .....  
 Plum .....  
 Quince .....  
 Raspberry .....  
 Sarsaparilla .....  
 Strawberry .....  
 Vanilla .....

Extra concentrated 4/6 lb  
 No. I., concentrated 3/6 »  
 No. II ..... 2/— »

## Essences for Vinegars.

Essence of Vinegar concentrated ..... 1/— lb  
     »    »    » aromatic ..... 3/— »  
     »    »    » Estragon ..... 4/— »

## Sundries.

Balsam, Peru prime ..... 7/6 lb  
     » Tolu » ..... 1/6 »  
 Civet, Abyssinian, prime ..... 10/— oz  
 Musk, Tonquin, in pods ..... 56/— »  
     »    » in grains ..... 76/— »  
 Styra, liquid ..... —/8 lb

Cachaça-Essence (for Bay-Rum) ..... 3/6 lb  
 Cream-Essence ..... 2/6 »

for producing a frothy foam upon  
 Beer, Wine, Champagne, Mineral-Water &c.

## Concentrated soluble Essences

for the manufacture of

Liqueurs, Brandies, Whiskies, Rums, Arracks, Bitters, Cordials &c.

simply by cold mixing and without distillation.

Essence of:

Absinth French ..... 3/— lb  
     » Suisse ..... 2/6 »  
 Almonds ..... 2/6 »  
 Angostura Bitters ..... 3/— »  
 Anisette, French ..... 3/— »  
     » Dutch ..... 3/— »  
 Aromatic ..... 2/6 »  
 Arrack ..... 2/6 »  
 Benedictine, Original ..... 3/— »  
 Bitter, Original ..... 3/— »  
 Boonekamp, Original ..... 3/— »  
 Cacao, white ..... 3/6 »  
 Caraway (Kümmel) ..... 3/— »  
 Cassis ..... 3/6 »  
 Celery ..... 3/— »  
 Chartreuse, Original ..... 3/6 »  
 Cherry-Brandy ..... 3/— »  
 Chocolate, white ..... 4/6 »  
 Coffee, white ..... 3/6 »  
 Cognac, Fine Champagne ..... 4/— »  
     » (Brandy) extra ..... 3/— »  
 Curaçao, Original ..... 3/6 »  
 Dutch Bitters ..... 3/— »  
 Elixir de Spaa ..... 3/6 »  
 English Bitters ..... 3/— »  
 Gin, Holland Original ..... 2/6 »  
 Ginger, Jamaica ..... 2/6 »  
 Ginger-Ale ..... 4/— »  
 Ginger-Brandy ..... 4/6 »  
 Grenadine ..... 4/6 »  
 Kirsch ..... 3/6 »  
 Kirschwasser ..... 3/6 »  
 Kummel ..... 3/— »  
 Limonade Champagne ..... 4/6 »  
 Mandarine ..... 4/— »  
 Marasquino, Original ..... 3/— »  
 Nectarine ..... 4/— »  
 Noyeau ..... 3/— »  
 Orange Bitters ..... 4/— »  
 Parfait d'Amour ..... 3/6 »  
 Peppermint ..... 3/— »  
 Persico ..... 3/— »  
 Punch au Rum ..... 4/— »  
     »    » Cognac ..... 5/— »  
 Raspail ..... 3/6 »  
 Rostopchin ..... 3/6 »  
 Rum, concentrated ..... 2/— »  
     » Jamaica, extrastrong ..... 3/3 »  
     » Kingston, concentrated ..... 2/9 »  
 Sherbet ..... 4/— »  
 Sliowitz ..... 3/— »  
 Spanish Bitters ..... 3/— »  
 Vanilla ..... 6/6 »  
 Vermouth ..... 2/6 »  
 Whiskey, Irish ..... 4/— »  
     » Scotch ..... 4/— »

Recipes and directions for use given!

Please note that all our goods are made up in packages bearing our trade mark (three owls) upon labels and capsules. Our "three owls" brand is known for unvarnished qualities.

<b>Oil Sandalwood</b> , West-India, superior.	4/6 lb
» <b>Sassafras</b> , american . . . . .	2/— »
taking orig. case of 70 lbs.	1/9 »
» <b>Savin</b> . . . . .	3/— »
» <b>Spearmint</b> , rectified, extrafine . . . .	6/9 »
» <b>Spike Lavender</b> . . . . .	3/— »
» <b>Storax</b> . . . . .	63/— »
» <b>Syringae</b> (Lilac) . . . . .	7/— »
» <b>Tansy</b> . . . . .	1/3 oz
» <b>Thyme</b> , French, red . . . . .	4/3 lb
» » white . . . . .	5/— »
» <b>Thymen</b> , rectif. . . . .	2/9 »
» <b>Valerian</b> . . . . .	15/— »
» <b>Verbena</b> . . . . .	18/— »
» <b>Vetiver</b> . . . . .	72/— »
» <b>Wintergreen</b> , americ., extrafine . . .	7/— »
» » artificial, white . . . . .	3/— »
» <b>Wormwood</b> , French, extrafine . . . .	25/— »
» » German, » . . . . .	25/— »
» <b>Ylang-Ylang</b> , Manila, superior . . . .	12/— (z
» » second Distillation . . . . .	6/— »

## Chemical preparations for Perfumery and Pharmacy. (Specialities)

<b>Anethol</b> pure . . . . .	8/— lb
<b>Anisic Acid</b> in crystals . . . . .	23/— »
<b>Apiol</b> . . . . .	3/— oz
<b>Aubépine</b> (Anisic Aldehyde) . . . . .	25/— lb
<b>Borneol</b> . . . . .	35/— »
<b>Carvol</b> . . . . .	8/— »
<b>Chinoline</b> , chem. pure . . . . .	5/6 »
<b>Cinnamid Acid</b> . . . . .	11/— »
<b>Citral</b> , pure . . . . .	19/— »
<b>Cumarine</b> in crystals . . . . .	25/— »
<b>Cuminic-Aldehyde</b> (Cuminol) . . . . .	3/— oz
<b>Cymol</b> . . . . .	25/— lb
<b>Eucalyptol</b> , pure . . . . .	5/— »
taking 28 lbs . . . . .	4/9 »
<b>Eugenol</b> , pure . . . . .	4/3 »
<b>Geraniol</b> , pure . . . . .	18/— »
<b>Helenine</b> . . . . .	4/6 oz
<b>Heliotropine</b> in crystals . . . . .	15/— lb
<b>Hyacinthine</b> (Oil of Hyacinth) . . . . .	68/— »
taking 10 lbs . . . . .	62/— »
<b>Lilac-Oil</b> . . . . .	7/— »
<b>Lilacine</b> . . . . .	10/— »
<b>Linalool</b> , pure . . . . .	11/6 »
<b>Menthol</b> , pure crystals . . . . .	11/3 »
<b>Muguet</b> . . . . .	7/— »
<b>Myrtol</b> . . . . .	21/— »
<b>Narcissus-Oil</b> . . . . .	40/— »
<b>Néroli</b> . . . . .	62/— »
taking 10 lbs . . . . .	60/— »
<b>Neroline</b> in crystals . . . . .	15/— »
<b>Oeillet</b> . . . . .	28/— »
<b>Oxychinoline</b> , chem. pure . . . . .	12/6 »
<b>Safrol</b> , pure 1,108 . . . . .	1/8 »
taking orig. case of 80 lbs . . . . .	1/6 »
<b>Terpineol</b> , pure . . . . .	3/3 »
taking 28 lbs . . . . .	3/— »
<b>Terpinolen</b> . . . . .	1/6 »
<b>Thymen</b> , rectif. . . . .	2/9 »
<b>Thymol</b> , pure crystals . . . . .	10/9 »
taking 28 lbs . . . . .	10/6 »
<b>Vanilline</b> in crystals . . . . .	45/— »

Spec. grav. 1,070—1,075.

B. P. 1898.

Now largely used for soaps; 14 oz are replacing 112 lbs Gum St. S.  
Specially suitable for Lilac Extracts.

Selected qualities.

A substitute for Oil Thyme, white.

Our own distillation, and guaranteed pure.  
Taking 28 lbs 6/6. Very low quotation.  
Spec. grav. 1,180.

Prices have advanced considerably.

Finest quality obtainable.

Melting point 21° C. Special price for large quantities.

Yielding the aroma of the Hawthorne flowers.  
Also called »Borneo-« or »Baros-Camphor«.  
Spec. grav. 0,965; soluble in 50% alcohol.  
Special prices to large buyers.  
From Storax; special prices for quantities.  
Spec. grav. 0,900.  
Active principle of Tonka beans. Guaranteed pure.

Spec. grav. 0,930; crystallizing at — 1° C.

Special prices for large quantities.

Aroma of the Heliotrope flower.  
Our invention. Yielding the aroma of Hyacinth flower. No other  
(largely used for toilet up)

Specially suitable for Lilac Extracts.  
Specially adapted for Sachets, Powders etc; yielding the aroma  
[of Lilac flowers]  
Highly recommended to perfumers.  
White, dry crystals. Market very firm.  
The most powerful basis for Lilac Soaps, most exquisite perfume.  
For Myrtle Extract and antiseptic scent.  
Entirely new, perfectly true and very powerful.

Synthetic Néroli-Oil, being identical with the finest (B. P. 1898)  
Finest prime quality; highly suitable for Soaps.  
Aroma of Carnations and Pinks; highly recommended to perfumers.  
Special prices to large buyers.

Largely used for laundry-soaps. Very low quotation.

Special prices for large quantities.

For cheap Lilac Soaps.  
A substitute for Oil Thyme, white.  
Chemically pure. B. P. 1898. Owing to very reduced stock and  
want of raw material the market is very firm with strong upward  
tendency.  
Guaranteed pure and equal to any other.



<b>Oil Hyacinth</b> (Hyacinthin).....	68/— lb
taking 10 lbs .....	62/— »
» <b>Juniper-Berries</b> , rectif. ....	3/— »
»       »       twice rectified ...	5/3 »
» <b>Juniper Wood</b> .....	—/8 »
» <b>Kuromoji</b> .....	6/3 »
» <b>Lavender-Flowers</b> , French, extrafine	6/6 »
»       »       »       fine ....	4/— »
» <b>Laurel Leaves</b> .....	12/6 »
» <b>Lemon</b> , extrafine .....	3/6 »
» <b>Lemongrass</b> .....	4/6d »
»       »       rectif. ....	5/— »
» <b>Lilac</b> (Syringae) .....	7/— »
»       »       (Terpineol) .....	3/3 »
taking 28 lbs .....	3/— »
» <b>Lilacine</b> .....	10/— »
» <b>Limes</b> (Limette) .....	9/— »
» <b>Linaloe</b> , extrafine .....	5/6 »
» <b>Mace</b> , distilled, white .....	2/6 »
» <b>Mandarine</b> , extrafine .....	25/— »
» <b>Marjoram</b> , German, extrafine .....	1/6 oz
» <b>Matico</b> .....	3/— »
» <b>Melissa</b> (Balm), true .....	25/— lb
» <b>Mirbane</b> , twice rectified .....	—/6d »
» <b>Muguet</b> .....	7/— »
» <b>Mustard</b> , genuine .....	15/— »
» <b>Myrrh</b> .....	3/— oz
» <b>Myrtle</b> , extrafine .....	10/6 lb
» <b>Néroli</b> .....	62/— »
»       taking 10 lbs .....	60/— »
»       Bigarade pétale, extrafine ..	6/9 oz
»       Portugal, extrafine .....	3/9 »
» <b>Niobe</b> , white .....	3/3 lb
» <b>Nutmeg</b> , distilled, white .....	2/6 »
» <b>Oeillet</b> .....	28/— »
» <b>Olibanum</b> .....	16/— »
» <b>Opoponax</b> , genuine .....	21/— »
» <b>Orange</b> , bitter, extrafine .....	8/6 »
»       sweet, extrafine .....	6/9 »
» <b>Orris Root</b> , Florentine concrete ..	17/— oz
» <b>Parsley</b> .....	12/— lb
» <b>Patchouly Leaves</b> , extrafine .....	14/— »
» <b>Pennyroyal</b> .....	3/10 »
» <b>Pepper</b> .....	11/— »
» <b>Peppermint</b> , American, rectif. ....	6/6 »
»       »       Japanese, rectif. ....	4/— »
»       »       Mitcham, engl. rectif.	27/— »
» <b>Petitgrains</b> , French, extrafine ....	18/— »
»       »       Paraguay, extrafine ...	7/6 »
» <b>Pimento</b> .....	9/6 »
» <b>Pinus sylvestris</b> , extrafine .....	2/3 »
»       »       pumilio,       » .....	C/— »
»       »       picea,       » .....	10/— »
» <b>Rose</b> (Otto) turkish superior .....	17/— oz
» <b>Rosemary</b> , French, finest .....	2/6 lb
»       »       Italian .....	1/9 »
» <b>Rosewood</b> .....	22/6 »
» <b>Rue</b> .....	13/— »
» <b>Safrol</b> , pure 1,108 .....	1/8 »
taking orig. case of 80 lbs.	1/6 »
» <b>Sage</b> .....	7/— »
» <b>Sandalwood</b> , E. J. superior .....	11/— »
»       »       E. J. fine .....	10/— »
»       »       Macassar .....	9/— »

Our invention. Yielding the aroma of Hyacinth flower. Now also largely used for toilet soaps.

Selected qualities.

Soluble in 3 parts of 70% alcohol. B. P. 1898.

Selected high quality. B. P. 1898.

Specially suitable for Lilac Extracts.

Special prices for large quantities.

Specially adapted for Sachets, Powders etc. yielding the aroma of [Lilac flowers.

Finest obtainable quality. Soluble in 3 parts of 70 % alcohol.

Scarce.

Spec. grav. 1,200.

The most powerful basis for Lilac Soaps; most exquisite perfume.

B. P. 1898.

For Myrtle Extract and antiseptic scent.

Synthetical Nefoli-Oil, being identical with the finest natural product

Selected high qualities.

Is now much used for soaps.

Aroma of Carnations and Pinks; highly recommended to perfumers.

Very superior quality; recommended for soaps.

Selected high qualities.

Distilled from best Florentine Orris. Tendency upwards.

High quality. Taking 28 lbs 13/9.

Our own brand, finest, twice rectified, waterwhite quality.

Soluble in 3 parts of 70% alcohol. Very scarce and very high prices are expected.

Finest qualities obtainable.

Original quality from the producers.

A compound.

Largely used for laundry-soaps. Very low quotation.

Finest quality possible, containing 90% Santalol, soluble in 5 parts of 70% alcohol. B. P. 1898. Sales in India have allround run very high this year, fetching about 20% higher prices for wood than last year. We advise buyers yet to profit of this present low quotation, as prices must be raised soon.

This oil corresponds as well to the B. P., but is not fully as high in percentage of Santalol.

Very remarkable as a cheap quality.

# Compound Essences for the immediate Production of Floral-Extracts, Cosmetics, Toilet-Waters, Hair-Waters, Mouth-Washes &c. &c.

For Extracts  $\frac{1}{2}$ —1 oz to 1 lb alcohol; for all other articles  $\frac{1}{4}$ — $\frac{1}{2}$  oz to 1 lb.

Special directions for use given!

## Essences for:

Extract of Bouquet Royal	45/— lb
Chypre	45/—
Edelweiss	60/—
Essbouquet Engl.	28/—
Frangipane	45/—
Heliotrope Peruv.	40/—
" white	40/—
Hyacinth	45/—
Jockey-Club	36/—
Lilac (Syringae) white	25/—
" turkish	25/—
May-Flowers (Muguet)	36/—
Musk	50/—
New Mown Hay	32/—
Opoponax	36/—
Patchouli	35/—
Pine needles	12/—
Pinks (Carnations)	45/—
Reseda	32/—
Rose	48/—
Russian leather	28/—
Stephanotis	55/—
Tea-Rose	45/—
Violet	90/—
White-Rose	45/—
Ylang-Ylang	40/—
Bay-Rum (americ. Shampooing)	12/—

Brilliantine	30/—
Cologne Water, Original, à la Farina	37/—
" finest	22/—
" au Muguet	30/—
Eau Athénienne, Portugal	18/—
" Millefleurs	32/—
Florida Water, Original	14/—
Hair-Oil, 1st quality	15/—
" 2d	10/—
Incense Extract	15/—
" Vinegar	15/—
Ixora Hair Wash	35/—
Lavender Smelling-Salt	15/—
" Water, Mitcham	30/—
Mouth Wash "Antibacterium"	17/—
" French	16/—
Pommade, 1st quality	12/—
" 2d	9/—
" of Vaseline	12/—
Poudre de Riz (Toilet powder)	15/—
Quinine Water for the hair	15/—
" à la Rose	25/—
Royal Incense Powder	16/—
Sachet Powders in 12 different odors from 25	to 70
Toilet Water, French	18/—
" Vinegar	12/—
Violet Hair Wash	70/—

## Compound Essences for Toilet-Soaps.

Highest possible concentration, 10—12 ozs to 1 Cwt Soap.

## Essences for:

	Quality	I.	II.	III.
Almond Soap	lb	13/—	7/—	5/—
Bay-Soap	"	25/—	—	—
Bouquet Soap	"	35/—	—	—
Chypre	"	50/—	—	—
Cologne Water Soap	"	40/—	25/—	13/—
Essbouquet	"	30/—	—	—
Frangipane	"	50/—	35/—	—
Genuine Glycerine-Soap	"	20/—	15/—	10/—
Glycerine Soap	"	13/—	8/—	5/—
Guimauve	"	55/—	32/—	18/—
Heliotrope	"	45/—	25/—	15/—
Honey	"	10/—	7/—	5/—
Hyacinth	"	56/—	—	—
Jockey-Club	"	35/—	20/—	—
Laundry	"	3/—	2/—	1/6
May Flowers	"	30/—	25/—	15/—
Myrtle	"	20/—	—	—
New Mown Hay	"	35/—	—	—

	Quality	I.	II.	III.
Old brown Violet Soap	lb	90/—	46/—	36/—
Old brown Windsor Soap	"	18/—	14/—	—
Opoponax Soap	"	30/—	20/—	—
Oriental Rose Soap	"	140/—	—	—
Persian Lilac	"	25/—	20/—	1/—
Pink (Carnations) Soap	"	20/—	15/—	—
Reseda Soap	"	25/—	20/—	1/—
Rose	"	20/—	15/—	10/—
Royal Thiridace Soap	"	90/—	46/—	1/—
Russian leather	"	18/—	—	—
Tea Rose Soap	"	68/—	—	—
Verbena	"	28/—	—	—
Violet	"	15/—	10/—	—
White Heliotrope Soap	"	52/—	—	—
White Lilac Soap	"	25/—	20/—	1/—
White Orris	"	50/—	—	—
White Rose and Glycerine	"	30/—	—	—
Windsor Soap	"	10/—	7/—	—

## Compound Essences for cheap Laundry and Household Soaps

A 1/6, B 1/4, C 1/2, D 1/3, E 1/4, F 1/5, G 1/6 per lb.

### Colours for Floral-Extracts etc.

Alcannin, soluble in Spirit	18/— lb
Green (fast)	3/—
for Extracts of Violet, Reseda, Mayflowers	
Quinine	2 3
for Quinine Water	
Red, deep	2/6
for Mouth Washes	
Violet	2/6
for Lilac Extracts	
Yellow (fast)	3/6

### Colours for Liquors, Spirits, Wines

Perfectly harmless:

Blue	1
Brandy Colouring (2 oz to 25 Gallons)	1
Claret Colouring for Wines	1
taking 1 Barrel	
Green	1
Red	1
Rose	1
Rum Colouring (10 oz to 25 Gallons)	1
Violet	1
Yellow	1

Please note that all our goods are made up in packages bearing our trade mark (a three owls brand) is known for unvarnished qualities.



Dealers will be supplied with these



PROMINENT DEALERS ALL KEEP

"WHITE ROSE" LAMP OIL ON SALE.

Bills for Counter Distribution

On application to **THE ANGLO-AMERICAN OIL CO., Ltd.,**

LONDON, LIVERPOOL, BIRMINGHAM, NEWCASTLE, GLASGOW, HULL, BELFAST, etc.

GOOD . . .

PROFITS !!!



Are NOW being realised by  
the RETAILER who Sells  
for Family Use . . . . .

WHITE ROSE



AMERICAN



LAMP OIL





Quality, Quantity & Strength guaranteed.

**BURROUGH'S**



HOME and  
EXPORT

**FINEST**

HOME and  
EXPORT

BRITISH PHARMACOPŒIA, 1898

'58 o.p. = 90 % Alcohol

ome  
and  
Export

**S V R**

O.P. O.P.

**58 60**

AT LOWEST PRICES

Special Quotations for above and other strengths on application  
DUTY PAID AND F.O.B. LONDON FOR EXPORT

ome  
and  
Export

**S V M**

O.P. O.P.

**61 64**

AND FINISH

For Retailers and Manufacturers' uses—with and without Mineral Naphtha.

WHITE in COLOUR and unusually free from unpleasantness.

Methylated Spirit of both strengths (61 o.p. and 64 o.p.) is now made in  
two qualities—the Old kind for Manufacturing uses, free from Mineral Naphtha  
which may be obtained upon applying to the Inland Revenue Authorities  
for permission to stock it, for allowed purposes, such as Liniments, Varnishes, &c.  
The New kind with mineral Naphtha for retail, for Burning purposes, &c.

Telegrams—"Burrocale, London."

Telephone No. 272, Kensington.

**BURROUGH** Cale Street **CHELSEA**  
Distillery

✍ WRITE FOR PRESENT PRICES

Telegrams—"Burrocale, London."  
Telephone—Kensington 272.

# BURROUGH'S

## CELEBRATED

B.P. 1898, &c.

# WINES

At Lowest Prices.

FOR CHEMISTS' SALE AND USES  
HOME AND EXPORT

PORT  
SHERRY B.P. 1898

IN BULK  
CASKS and JARS

MALAGA  
TARRAGONA

ALSO IN BOTTLE

QUININE ORANGE WINE

B.P. 1898  
Free from Salicylic Acid.

INVALIDS' WINES

"RED CROSS" SCOTCH WHISKEY 10 YEARS

"RED CROSS" IRISH WHISKEY OLD

"RED CROSS" COCA WINE

Dr. A. B. GRIFFITHS says, "'Red Cross' Brand of Coca Wine is second to none  
the market."—24th August, 1896.

**Jas. BURROUGH** Ltd. Cale Street Distiller

WRITE FOR PRICES

**Chelsea**

S.V.R. & S.V.M. vide other side

**LONDON S.W.**



FACTORS TO THE WAR OFFICE, ADMIRALTY, AND THE INDIA OFFICE.

Telegraphic Address—"OXTONGUES, LONDON."

Telephone No. 579 King's Cross.

# POULTON & NOEL'S Specialities for Invalids

(formerly manufactured by FREDERICK MASON).

## ESSENCE OF BEEF,

CHICKEN, VEAL, MUTTON, &c.

*Concentrated Beef Tea,*

PORTER SOUP FOR INVALIDS, AND OTHER SPECIALITIES,

AS SUPPLIED TO THE LEADING LONDON HOSPITALS.

## P. & O. SAUCE.

## Wholesale Price List.

ADDRESS:

## POULTON & NOEL,

ENGLANDIAN STEAM WORKS,

BREWERY ROAD, LONDON, N.

Office, - - MONUMENT CHAMBERS, EASTCHEAP, E.C.

Liverpool Depôt, - - 27, KING STREET.

Bristol Depôt, - - 83, REDCLIFF STREET.

POULTON & NOEL'S SPECIALITIES FOR INVALIDS.

# *Home-Made Beef Tea*

OF DOUBLE STRENGTH,

AS SUPPLIED TO THE LEADING LONDON HOSPITALS.

**5s. Per Dozen Half Pints.**

**8s. Per Dozen Pints.**

**15s. Per Dozen Quarts.**

## TERMS AND CONDITIONS OF SALE.

Accounts are due on 15th of the month following the date of Invoice.

All Cheques and Money Orders should be made payable to the Firm, and all correspondence addressed to BELGRAVIAN STEAM WORKS, BREWERY ROAD, LONDON, N. Travellers or Agents have no authority to collect Accounts.

We should esteem it a favour if our Customers in sending orders would keep them separate from advices of remittances.

We are not responsible for breakage.

Cases are not charged and are not returnable; they cannot, therefore, be received at the Works unless the Carriage is prepaid.

No Traveller or Agent has authority to book goods for forward delivery or make alterations in Prices or Terms without confirmation from Head Office.

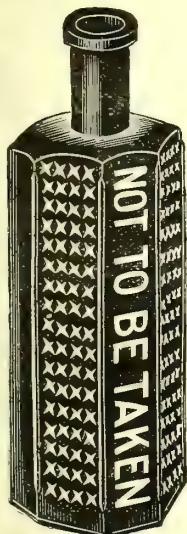
All quotations are subject to goods being in stock and to the fluctuations of the market.

As discrepancies frequently occur with the Railway Companies, we should be obliged to our Customers would weigh the Cases immediately on receipt, and advise us of any shortage not containing the weight specified on the Address Card.

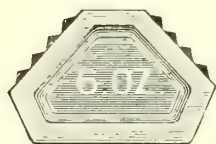
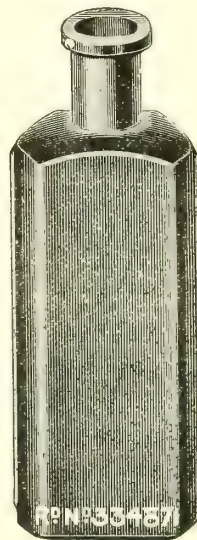
All goods put free on Rail or Steamer in London.



# The Practical Poison Bottle.



FRONT.

RD. No. 834871.  
BOTTOM.

BACK.

## Principal Features.

The Practical Poison Bottle has been designed by one of the largest *practical* bottle-makers in the trade, and possesses the following advantages :

**Touch.**—One side of the bottle is made as rough as possible with diamond projections, and this, with the prominent ribs at the corners, makes the bottle at once distinguishable by touch and conform perfectly to the Poison Regulations. The other side is smooth, but the bottle cannot be handled in any way without its peculiar shape being noticed.

**The Shape** is different from any other bottle ever produced, being a combination of the flat and octagon poison bottle.

**Strength.**—All the corners are rounded, thus doing away with weak corners and making the bottle as strong as possible, and reducing breakages in packing and handling to a minimum.

**Labelling and Packing.**—A smooth side is provided for the label, of ample dimensions for full-sized dispensing-labels. The shape of the bottle admits of it being wrapped, without waste of space and paper, so as to make a neat parcel.

**Sizes.**—It is made in all sizes, from two-drachm to twenty-ounce capacity, and in either blue or actinic green glass.

**Price.**—It is one of the cheapest and simplest and best-finished bottles ever placed before the trade.

## To be obtained from

Maw, Son & Thompson, Aldersgate Street, London, E.C.

Evans, Lescher & Webb, 60 Bartholomew Close, E.C.

Evans, Sons & Co., 56 Hanover Street, Liverpool.

J. Sanger & Sons, 2 Winsley Street, London, W.



Ser. 00277.

R.R. No.  
218306

Ser. 1448.



Ser. 1500.

R.R. No.  
222445.

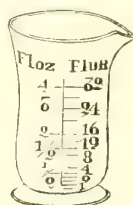
Ser. 1885.



Ser. 0354.



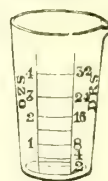
Ser. 1219.



Ser. 01010.



Ser. 0466.



Ser. 01018.



0328.



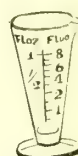
Ser. 00306.



Ser. 1790.



Ser. 1951.

Telegrams—  
"POTHS LONDON."Telephone  
Nos. 1365 and 1381 Avenue

Ser. 01008.

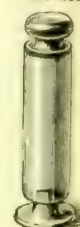


Fig. 7a.



Fig. 23.



00840.



00495.



Fig. 14.



00808.



Ser. 00798.

Illustrated

Catalogues.

Ser. 00798.  
Stopper 1278.

00848.



00815.



Ser. 00843.



00810.

00490.  
Stopper 1277.

Fig. 14a.



Fig. 11a.



Fig. 11a.



Fig. 11.



Fig. 5a.



Fig. 4a.



Ser. 0464.

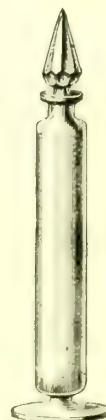


Fig. 9a.

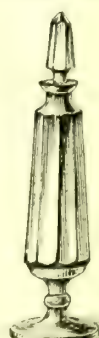


Fig. 22.

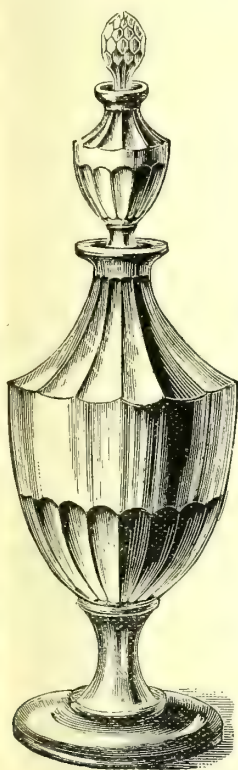
# H. POTHS & CO.

4, 5, & 6  
Bury Court, St. Mary Axe,  
LONDON, E.C.

SPECIALLY ORGANISED FOR EXPORT.



# VITRIFIED LABELS.



00275 Gold inscription.



00278 Label I.



00275 Label II.



New Regd. Square Poison.

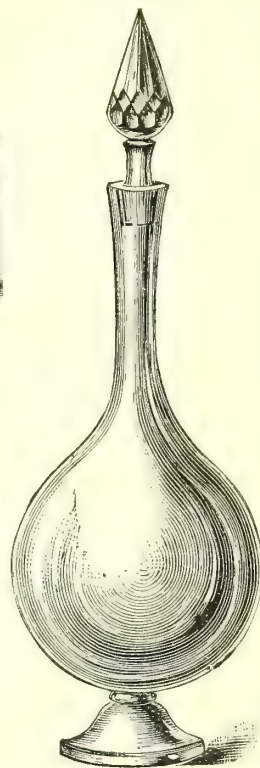
Telegrams—"POTHS LONDON."



Telephone Nos. 1365 and 1381 Avenue.



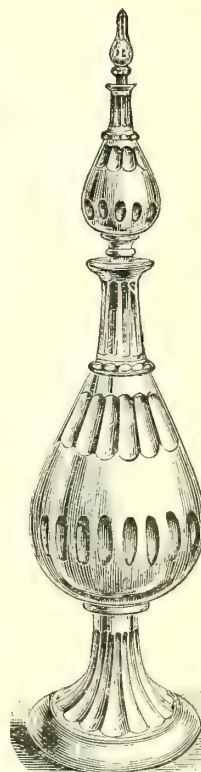
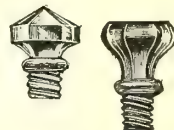
Our Special Round Poison.



## H. POTHS & CO.

4, 5 & 6 BURY COURT,  
ST. MARY AXE, LONDON, E.C.

NEW ILLUSTRATED PRICE LIST ON APPLICATION.



Shape No. 10c.



Shape No. 10d.



Shape No. 10b.

# VITRIFIED LABELS.

# GLASS BOTTLES

FOR

## Drugs

(Fluid and Powder),  
Poison Storing,  
Citrate Magnesia and Salines  
Castor and other Oils,

## Dispensing

(For Corks & Screw Stoppers),  
Cough Mixtures,  
Perfumery and Toilet  
Preparations,

## Feeding

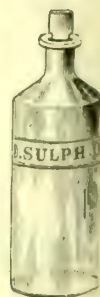
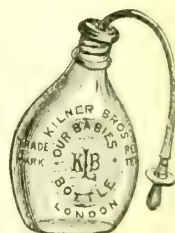
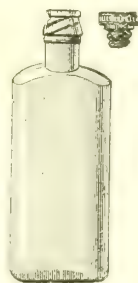
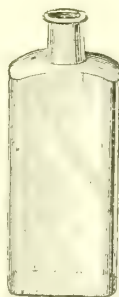
Embrocations,  
Polishes (Boot & Furniture),  
Disinfectants,  
Stains, Varnishes,

## Aërated Waters

(For Corks and Stoppers),

## Wines, Spirits

And many other purposes



ILLUSTRATED CATALOGUE AND PRICES ON APPLICATION TO

# KILNER BROTHERS,

— No. 3 G.N. GOODS STATION, KING'S CROSS, LONDON. —



# **KILNER'S**

## **"POISON-STORING"**

### **BOTTLES.**

ROUND SHAPE, FLUTED, WITH PLAIN SPACE FOR LABEL,  
NARROW AND WIDE MOUTHS.

Made in conformity with the views of the leading Wholesale Druggists to meet the requirements of the New Poisons Regulations.—"A bottle or vessel rendered distinguishable by touch from the bottles or vessels in which ordinary articles are kept in the same warehouse, shop, or dispensary."

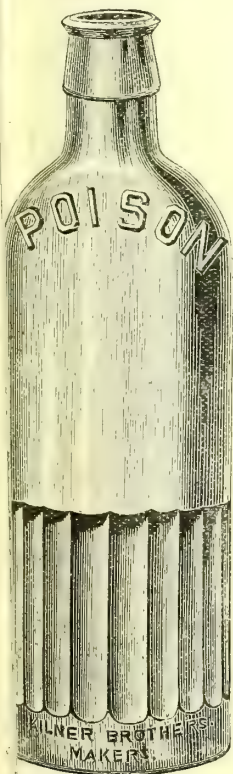
*The Chemist and Druggist, April 22, 1899, writes:—*

#### "POISON-STORING BOTTLES.

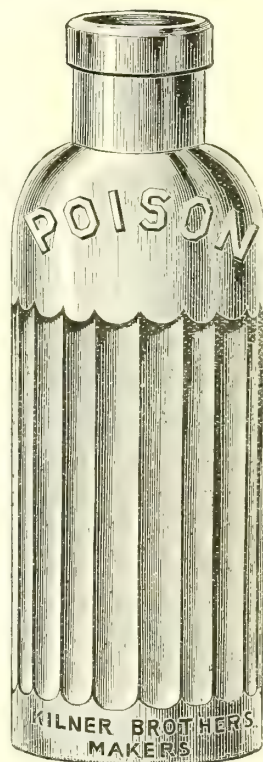
"We thought it a difficult matter to get something new in poison-bottles, and probably it is, but Messrs. Kilner Brothers, King's Cross, N., have hit upon something so novel, and yet so familiar, as to suggest that success lies in simplicity. They have produced a blue fluted bottle in which the fluting is concave, not convex as hitherto, the result being greater distinction to touch. Another new departure in the bottle is that it is fluted all round except on the upper half of the front where the label should be."

*The British Medical Journal, Sept. 29, 1899, writes:—*

"THE poison-bottle in general use is fluted or ribbed, and those used for dispensing are of some distinctive shape or colour. Messrs. Kilner Brothers, King's Cross, London, N., have devised a new poisons-storing bottle—a blue fluted bottle in which the fluting is concave (not convex, as hitherto), a greater distinction to touch being thus obtained."



FRONT  
(showing space for Label).



BACK.

• • • MANUFACTURED ONLY BY • • •

## **KILNER BROTHERS,**

WORKS  
TORNHILL LEES, AND CONISBORO', YORKSHIRE.

King's Cross, London.

# BOTTLES

AND

## EARTHENWARE

FOR

DRUGGISTS'

USE.

DISPENSING  
FLATS,  
PHIALS,  
SCREW-CAPPED  
POMADES,  
&c., &c.

ENQUIRIES  
SOLICITED.

SPECIAL  
MOULDS MADE  
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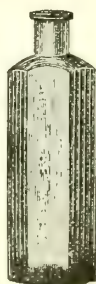
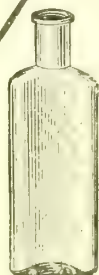
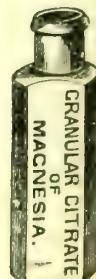
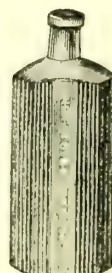
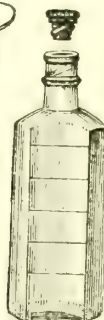
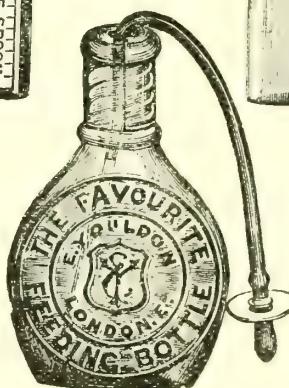
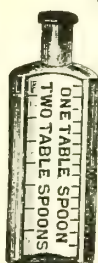
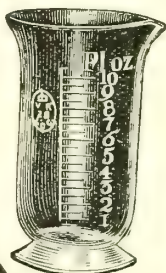
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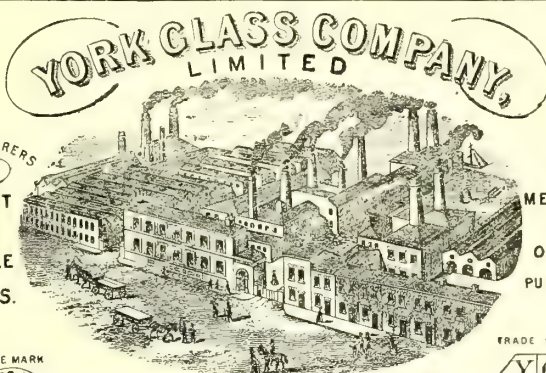




N. M. Round,  
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Telegraphic Address—  
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AND  
BOTTLE  
GLASS.

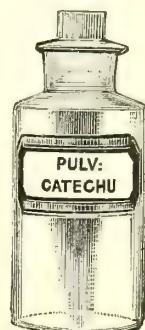


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FISHERGATE, YORK.

FOR  
MEDICAL  
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OTHER  
PURPOSES



ESTABLISHED  
A.D. 1794.



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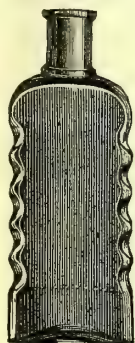
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We wish specially to caution *intending purchasers* of Recess Label Shop-rounds, Poisons, Ground Capped Oils, and Earthenware Jars that our **PHOTOTYPE LABELS** present many advantages over **IMITATIONS**.

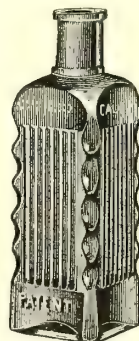
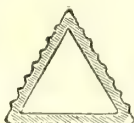


Serrated  
Poison-bottle.

## THE "WILSON" POISON-BOTTLE.

From THE CHEMIST AND DRUGGIST.

The "Wilson" Poison-bottle.—Some months ago Mr. James Wilson, the London representative of the York Glass Company (Limited), 76 Finsbury Pavement, E.C., showed us a model of a new poison-bottle which he had invented, and which struck us at the time as deserving to rank with Mr. Wilson's other well-known invention—the swan-neck show-on the market. It is **triangular** edges is **serrated**, and the two front, are longitudinally grooved poison-bottle. The result is that out being struck by the fact that person grasping it in the dark or in a fit of absent-mindedness is almost certain to have his attention drawn to the fact that the contents are not a usual medicine. We gather from Mr. Wilson, who has patented his invention, that the bottle has caught on with dispensing chemists. It is made in ordinary bottle-glass and in actinic amber and cobalt-blue glass by Mr. Wilson's principals.



Serrated  
Poison-bottle.

### THE SERRATED POISON-BOTTLES

are at present only made in Actinic Green Glass, and of the following sizes:—

1, 1½, 2, 3, 4, 6, 8, 10, 12, 16, 20 ozs.

One side of these bottles is smooth for an adhesive label; the other two, which are lettered near the shoulder respectively "Not to be taken" and "Caution," are both completely ribbed, or, if desired, one of them can be provided with a Slip bearing the name of contents or other lettering. When required lettered, a small charge will be made towards the cost of the lettered panel. Lettered Bottles can only be supplied in the usual minimum quantities.



Swan-Neck  
Globe,  
Cut Spiral  
Stopper.



N. M. Poison, with  
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MILNE'S ANTISEPTIC GAUZES, in sealed packets, cartons, tins, & jars.

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Antiseptic Dressings Factory, LADYWELL, S.E.

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Eczema of the  
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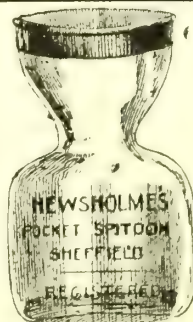


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1B.	Thin, for leg below knee	—	—	10 1/2	3	5/6
1A.	Thick	—	—	10 1/2	3	7/6
8.	Thin, for leg and knee	—	—	14	3	7/6
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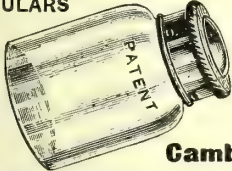
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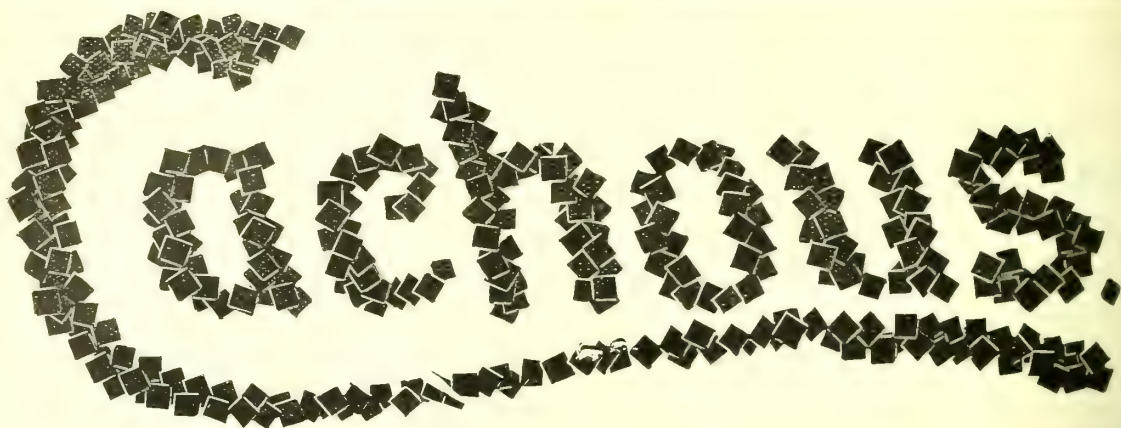


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On  $\frac{1}{4}$  gross Cards, and in  $\frac{1}{2}$  gross Glass-top Boxes, 7/- per gross.

4 $\frac{1}{2}$ d. Screw-top Bottles, 2/9 per dozen, or 30/- (net) per gross.

*Customer's own Name and matter put on the 4d. Bottles Free on orders of 1 gross and upwards.*



## The Royal Japanese Cachous.

A VERITABLE CACHOU DE LUXE.

Put up in beautifully-designed envelopes printed in colours, and packed in handsome  $\frac{1}{2}$  gross Boxes. The Cachous have a distinct and delightful flavour, and cannot fail to become popular favourites.

In 2d. Packets. Price, 14/- per gross.

*Write for Sample of New Flavour "Japanese Violets"*



## Liquorice Lozenges (new).

VIOLET, ROSE, VANILLA, ANISEED, AND PLAIN FLAVOURS.

In Cartoons, 7/- per gross.

**SPECIAL NOTE.**—Cachous, packed for the Home and Export Trade, in any style, with Customer's own name and special printed matter; also, where required, any particular flavour or perfume.

*Samples sent, Post Free, to any part of the World.*

**POTTER & CLARKE,** Wholesale Druggists,  
60, 62, & 64 ARTILLERY LANE, LONDON, E.



# NEW THINGS

We give below a view of our Stand  
at the CHEMISTS' EXHIBITION re-  
cently held at MANCHESTER.



## THE CHEMIST AND DRUGGIST

of  
June 23rd  
says :—

"We found Messrs. POTTER & CLARKE's representatives from London very busy with their customers from the Manchester district. There were a lot of new things at their stall which we should have liked to have more closely examined. First, we noted a picture showing views of the new herb-farm which the firm have acquired at Carshalton, in Surrey, in one of which Mr. Goddard Clarke is seen standing in a field of chamomiles. 'Fer Vino' is the name of a new tonic wine introduced by the firm. This is, we should think, absolutely the first speciality of the kind of which the sale is to be strictly confined to registered chemists and druggists. The reason for this is that Messrs. Potter & Clarke submitted a sample to the Board of Inland Revenue, and they passed it as non-excisable, but they stipulated that it shall be sold only as a medicine by registered chemists and druggists. This is an exceedingly important ruling. A new cachou entitled 'Japanese Violet,' was shown by the firm. It is put up attractively in 2d. envelopes. There was a very good selection of herbs and seeds on the stall, as well as liquid extracts and remedies and medicated wines, and specimens of the new edition of Potter's 1d. 'Popular Herbal and Family Medical Guide.'"

**POTTER & CLARKE,** Wholesale Druggists,  
60, 62 & 64 ARTILLERY LANE, LONDON, E.

"SYSTEMA OMNIA VINCIT."

# **SOUTH LONDON**

## **School of Pharmacy**

(LIMITED),

**325 & 409 Kennington Road, London, S.E.**

ESTABLISHED 1868.

INCORPORATED 1887.

**Dean of the School—Dr. JOHN MUTER, F.R.S.E., F.I.C., F.C.S., &c.,**

**Assisted by**

**Mr. A. H. MITCHELL MUTER, F.I.C., F.C.S., &c., and a Staff of 4 Specialists.**

- 1.—The oldest-established Institution of its class.**
- 2.—The largest staff, each subject being separately taught by a specialist thereof.**
- 3.—Complete Chemical, Physical, and Biological laboratories.**
- 4.—A fine Museum of Specimens continually renewed.**
- 5.—A Pharmaceutical laboratory with steam plant and all appliances for manufacturing galenicals, with Dispensary attached.**
- 6.—Thirty-two years' invariable success of its students at examination.**
- 7.—Absolutely inclusive fees, covering use of books from library.**

The Session 1900-1901 commences on **September 3, 1900**, and entries are now being booked for that date.

The Tutorial Class for the October examination starts on **August 27**, fee **£4 4s.** Students taking this course and afterwards desiring to go on till a later examination are credited with this sum off the ordinary fees.

For new Syllabus and Calendar apply to the **SECRETARY OF THE SCHOOL, 325 Kennington Road, S.E.**

For advice as to the best course of study in special cases, personal application should be made to the Dean.



# THE LONDON COLLEGE

. . Of Chemistry, Pharmacy, and Botany . .

HENRY WOOTTON, B.Sc. (Lond.) - Principal.

**NEXT TERM BEGINS ON SEPTEMBER 5, 1900.**

RESULTS—JULY, 1900: MAJOR, 3; MINOR 24. PASS LIST WILL BE SENT ON APPLICATION.



The London College.

Lectures delivered daily, at 10 a.m. and 3 p.m., on CHEMISTRY, PHYSICS, BOTANY, MATERIA MEDICA, and PHARMACY.

Practical Work in the CHEMICAL, PHARMACEUTICAL, and PHYSICAL LABORATORIES daily, 11 a.m. to 2 p.m. and 2 to 5 p.m.

Tutorial Classes daily at 4 p.m. (except Saturday).

The SPECIAL TUTORIAL CLASSES in the various subjects are held daily (in addition to the regular Lectures and Practical Work). For the purpose of these Classes, the Students are divided into groups of twelve. Every Student attends four Tutorial Classes during the week, and as in this way the Teachers ascertain the weak points of each Student, the system is practically equivalent to individual teaching.

## EVENING CLASSES

are held for Minor and Major Students.

The COLLEGE BUILDINGS include roomy and completely fitted CHEMICAL, PHARMACEUTICAL, and PHYSICAL LABORATORIES, LECTURE HALL, MUSEUM, and CLASS ROOMS, LIGHTED THROUGHOUT BY ELECTRICITY. There are two large Chemical Laboratories on the ground floor, well ventilated and lighted. The Fittings are quite new, and of the most modern description, including three Fume Cupboards. Each Student has a separate commodious bench, fitted with gas, water, and sink, with large locker for apparatus.

The large Lecture Hall is roomy and excellently ventilated.

## THE BOTANIC GARDEN

is a special feature of the LONDON COLLEGE.

A quarter of an acre of ground is set apart for the cultivation of Medicinal and Herbaceous Plants.



Corner of one of the Chemical Laboratories.

Prospectus and further Particulars may be obtained on application to

THE SECRETARY, LONDON COLLEGE OF CHEMISTRY, 323 Clapham Road, LONDON, S.W.



# Westminster College of Chemistry & Pharmacy

Principal... .. Mr. GEORGE S. V. WILLS, F.L.S., M.P.S.

**The next Complete Course will commence on SEPTEMBER 3rd.**

NAMES ARE NOW BEING REGISTERED.

Gentlemen who are not otherwise engaged can enter College on Wednesday, August 1st, **FREE OF EXTRA CHARGE.** The Month of August will be devoted to Practical Chemistry and Botany. Evening Classes are held every Tuesday and Thursday.

**FEES.**—August or September to the January Exam., £10 10s.; Until Qualified, £15 15s.

In addition to the ordinary course, there will be **Special Lectures and Classes** for those desirous of presenting themselves in October. **FEE.**—From August 1st to the October Exam., £5 5s.

For Prospectus, &c., apply to **Mr. E. WALDEN**, Secretary, Trinity Square, Borough, London, S.E.

## IMPERIAL COLLEGE OF CHEMISTRY,

49 & 51 IMPERIAL BUILDINGS, LUDGATE CIRCUS, E.C.

Principal ... .. **FREDERICK DAVIS.**

**JULY RESULTS:**—Twenty-two Candidates presented themselves for examination from this College. Seventeen passed the practical portion (first day), of whom Fifteen passed the entire examination, including Mr. J. HARPER (who had not studied elsewhere) at his first attempt. *Write for Prospectus.*

Now Ready. NINTH EDITION, Med. 24mo, Limp Roan, for the Pocket, 10/6.

## THE EXTRA PHARMACOPŒIA.

Revised in accordance with the "BRITISH PHARMACOPŒIA," 1898, with Articles on SEROTHERAPY and ORGANOOTHERAPY, MEDICAL REFERENCES, and a THERAPEUTIC INDEX.

BY MARTINDALE AND WESTCOTT.

"Is more useful than ever, and no pharmacist can possibly afford to be without it."—BRITISH AND COLONIAL DRUGGIST.

LONDON: H. K. LEWIS, 136 GOWER STREET, W.C.

# THE EDINBURGH CENTRAL SCHOOL OF PHARMACY,

26 CLYDE STREET, EDINBURGH.

Principal ... .. **WM. B. COWIE**, Pharmaceutical Chemist  
(Heriot-Watt Medallist in Chemistry).

At the July Examination, held in Edinburgh, the following Candidates passed from this School:—

Miss C. P. P. Blyth, Dysart	Mr. James D. Harvey, Stromness	Mr. James Park, Hawick
Mr. Neilson Brown, Loanhead	„ Alfred Hershberg, Edinburgh	„ W. Shepherd Parker, Carlisle
„ Alfred Deans, Portknockie	„ James Rankin Hetherington, Leven	„ Robert S. Paterson, Bonnyrigg
„ James M. Foote, Edinburgh	„ George A. McLean Lee, Fraserburgh	„ John Sharp, Aberdeen
„ Charles S. Geddes, Aberchirder	„ Charles S. S. McDonald, Earlston	„ David R. Whitley, Rhyll.
„ Sidney C. Halliday, Harrogate	„ William Meldrum, Markinch	

The Majority of these passed at the First Attempt.

This School affords excellent facilities for Pharmaceutical Students, each department being splendidly equipped, and lectures beginning from the foundation of each subject.

**Special Course for October Examination commences on August 20. Winter Session (1900-1) commences on October 3, 1900, and Evening Classes on September 3.**

FOR SYLLABUS (ILLUSTRATED) AND FULL PARTICULARS APPLY TO

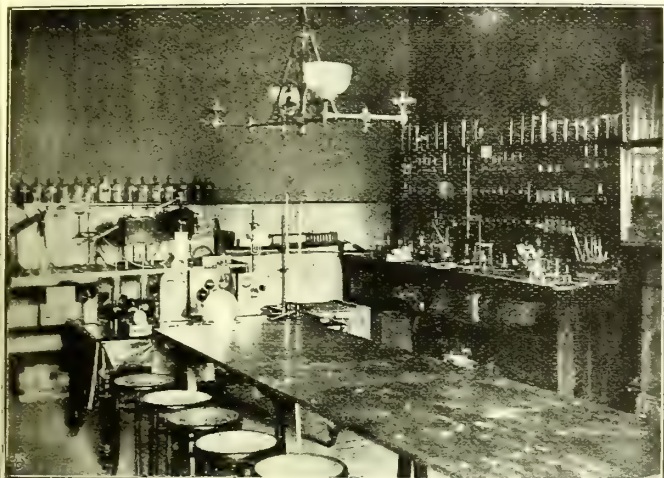
**WM. B. COWIE, 26 Clyde St., EDINBURGH.**



# CENTRAL SCHOOL OF PHARMACY

2 CHARTERHOUSE STREET, E.C. (over 39 Holborn Viaduct).

Principal: **C. EDWARD SAGE, F.C.S., Ph.C.**



This School was opened in 1895 by MESSRS. ELLWOOD & SAGE purposely to provide a complete course of instruction for evening students. The success of the School has led to a removal to larger and more central premises, and the establishment of a day course of lectures in addition to the evening classes.

The list of successes by our evening students at Pharmaceutical Examinations is the best witness of the efficiency of the training given, and we have frequently had evening students successful at the first attempt after 4 or 6 months' attendance at evening classes only.

With day students we have so far had **no failures** for the Minor, and our

students are always willing to recommend the School.

## MINOR RESULTS:—

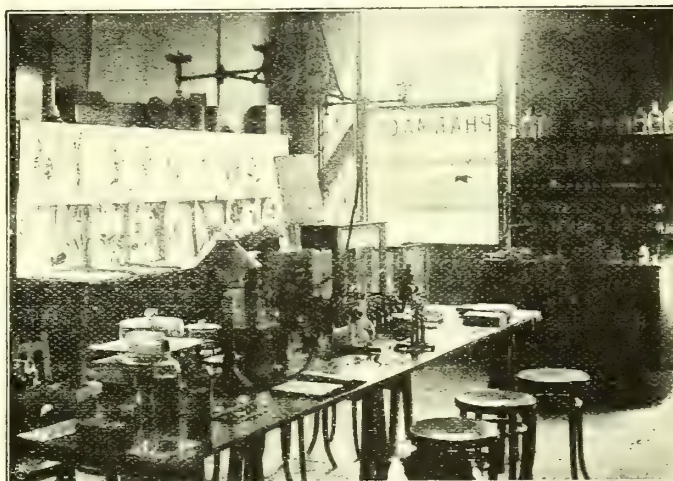
April, 3 passes; no failures.

July, 3 passes; no failures.

The Winter Course commences in October, and entries are now being taken.

A short Day and Evening Course for the October Minor has just commenced, and only a few benches remain vacant.

To pass the Minor Examination students require careful training and systematic teaching. Each individual student at the Central School receives personal instruction and a thorough practical training in all subjects.



Practical Chemistry is a special feature of the School—no subject is neglected for it; but it is the one which shows the best evidence of training at the examination, and the one which should prove of most value to qualified chemists in business.

## Fees for the Minor Examination:—

Day Course (3 months). . . . £10 10 0

Evening Course (3 nights weekly) . £4 4 0

Special classes for other examinations.  
Chemistry taught for all examinations.  
Private tutors for all subjects.

Intending students should call and see the Laboratories, or for further particulars write to the Secretary.





# Metropolitan College of Pharmacy.

Principal . . . . W. WATSON WILL.

This College was established with the object of providing a sound and honest education for the Pharmaceutical Student in those branches of science with which he is directly brought into touch in the practice of Pharmacy. Every facility is provided for the systematic study of the following subjects:—Chemistry (Inorganic, Organic, and Practical), Botany, Vegetable Histology, Pharmacognosy, Physics, and Practical Pharmacy.

## SESSIONS.

<b>WINTER—</b> September 1 to December 31.	<b>SPRING—</b> January 1 to April 15.	<b>SUMMER—</b> April 16 to July 24.
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During each session a complete course of lectures is delivered on all the subjects required for the Pharmaceutical Examinations. Students are advised to enter at the commencement of a course to ensure success. Special subjects can be selected at the option of the Student. Hours of attendance, 9 A.M. to 6 P.M. All Students work under the direct supervision of the Principal and an efficient Staff of Demonstrators.

**COLLEGE BUILDINGS.**—As now completed the Premises contain—Three Chemical Laboratories, Two Histological Laboratories, Two Materia Medica Museums, Two Physical Laboratories, Pharmacal Laboratory, Dispensary, Distillation Room, Balance Room, Lecture Theatre, and Cloak Rooms. The New Laboratory is equipped with all modern appliances and contains 80 Working Benches.

**In Equipment and Facilities for Study this Establishment is Unsurpassed in the Kingdom.**

*On the opposite page are views of the Laboratory and Lecture Theatre.*

## EXAMINATION RESULTS.

The number of M.C.P. Students who were successful in passing the Minor Examination during the Sessions 1897-98 and 1898-99 constitute nearly **one-third** of the total pass in London.

**SESSION 1899-1900: MAJORS, 10; MINORS, 96. JULY: MAJORS, 3; MINORS, 36.**

**SESSION 1900-1901.**—The Lectures for this Session commence on **SEPT. 1st**, and are arranged to cover the work for the January or ulterior examinations. The Lecture commences at the foundation of each subject, and all the Student's work is so arranged that each works independent of his neighbour.

**FEES:—Major Course, Eight Guineas; Minor Course, Ten Guineas.**

**Special Tutorial Course** begins on **SEPT. 1st** for the October Examinations. This Course is only intended for Candidates who have previously gone through a Complete Course. Entries for September are now being registered.

## EVENING CLASSES

For Major Students are held on Tuesdays, Wednesdays, and Fridays, the course extending from September 1st to the following July 24th. Hours, 7 p.m. to 10 p.m.

For Minor Students there are three courses similar to the Day courses; the classes are held on Mondays, Wednesdays, and Fridays. Hours, 7 p.m. to 9 p.m.

For New Minor Syllabus, Illustrated Views, and full particulars, all communications should be addressed to the Secretary,

**WALTER S. CARVER, 160 & 162 KENNINGTON PARK ROAD, LONDON, S.E.**





METROPOLITAN COLLEGE OF PHARMACY—*LABORATORY.*



METROPOLITAN COLLEGE OF PHARMACY—*LECTURE THEATRE.*



# THE MANCHESTER COLLEGE OF PHARMACY,

225a and 227a Oxford Street, Manchester.

Director ... .. **Mr. CHAS. TURNER, F.C.S.,**  
PHARMACEUTICAL CHEMIST.

**THE NEXT TERM WILL BEGIN ON AUGUST 20th, and will include the following Classes:—**

For the **Minor Examination** there are three distinct sets of classes—

## FULL-TIME CLASSES.

**The Full-Time Class** works from 9.30 A.M. to 4.30 P.M. every week-day, except Saturdays, which are half-holidays, thus:—

**Mondays, Wednesdays, and Fridays:** Mornings, 9.30 to 11.30, Class and Lecture on Chemistry and Physics. 11.30 to 12.30, Pharmacy and Pharmacy Law.

**Afternoons, 2 to 4.30, Practical Chemistry.**

**Tuesdays, Thursdays, and Saturdays:** Mornings, 9.30 to 11.30, Class and Lecture on Botany and Latin. 11.30 to 12.30, Materia Medica.

**Afternoons, 2 to 4.30, Tuesdays and Thursdays, Dispensing.**

## LOCAL CLASSES.

**The Once-a-week Class** works on Tuesdays only, thus:—  
2 to 4 P.M., Classes and Lectures on Chemistry, Latin, and Physics; 4 to 6 P.M., Classes and Lectures on Botany and Materia Medica; 7 to 8 P.M., Lecture; 8 to 10 P.M., Practical Chemistry, Dispensing, and Pharmacy.

**The Evening Class** works on Mondays, Wednesdays, and Fridays, from 8 to 10 P.M.

**Mondays:** Chemistry, Latin, and Physics.

**Wednesdays:** Practical Chemistry and Dispensing.

**Fridays:** Botany, Materia Medica, and Pharmacy.

For the **MAJOR EXAMINATION.**

**The Full-time Class** works from 9.30 A.M. to 4.30 P.M. every week-day except Saturdays, which are half-holidays.

**A Six Months' Course for the April Examinations will begin  
on October 1st.**

# NORTHERN COLLEGE OF PHARMACY

BURLINGTON STREET, MANCHESTER.

## PRINCIPALS—

**GEO. CLAYTON, F.C.S., Ph.C.    F. LAWSON, B.Sc. (Lond.), Ph.C.**

The College buildings possess Museum, Lecture Room, Class Room, Dispensaries, Large Laboratory specially built and fitted for Pharmaceutical training, Volumetric Laboratory, Balance and Microscope Room, Cloak Room, &c.

The high character of the training is fully maintained, its thoroughness being demonstrated by the significant fact that by far the greater number of Northern College men pass at their **FIRST ATTEMPT.**

**The NEXT COURSE commences on AUGUST 29th.**

**EARLY APPLICATION FOR BENCHES IS ADVISED.**



# THE LIVERPOOL SCHOOL OF PHARMACY

6 Sandon Terrace, Upper Duke St., LIVERPOOL.

Principal—R. C. COWLEY, Ph.Ch., Analytical and Consulting Chemist,  
Assisted by Able Demonstrators.

This School is officially recommended by the Liverpool Chemists' Association, who have appointed a Committee of Education to visit the School and superintend the Course of Study.

## SYNOPSIS OF CLASSES.

**DAY CLASSES.**—The Winter Course begins the 10th of September. The Spring Course begins the first week in January. The Summer Course begins the first week in April.

**EVENING CLASSES.**—A Class is held on Tuesday Evening, commencing at 6.30, for advanced "Minor" Students. Wednesday Evening Classes are held for beginners, commencing at 6 p.m.

A Short Revision Class for the October Examination will begin on August 20th.

To secure Benches, intending Students should notify the Principal at an early date.

*NOTE.*—50 per cent. of the Candidates from this School passed at the July Examination, also that the Pharmaceutical Society's Silver Medal was won by a Liverpool Student this year

**THE SYLLABUS** for the forthcoming Session, apart from giving a Synopsis of Classes, will contain a quantity of information relating to **VOLUMETRIC ANALYSIS**, such as **EQUATIONS**, **MOLECULAR WEIGHTS**, &c. All Students intending to enter for their examination during the next Session should write for one.

## GLASGOW

## SCHOOL OF PHARMACY,

Blythswood Chambers,

180 West Regent St., GLASGOW.

Principal ... .. **JOHN LOTHIAN.**

*Pharmaceutical Chemist, Medallist of the Pharmaceutical Society, &c.)*

At the July Minor Examination just concluded in Edinburgh, the following **THIRTEEN** Students from this School were successful, **ELEVEN** of whom passed at their first attempt:—

John Buchanan, Ayr  
James Crawford, Stirling  
Matthew Crowden Carruthers, Buckie  
Albert Dyet, Stonehouse  
James Leonard Evans, Coatbridge  
William White Flett, Glasgow

William Charles Hogg Garvie, Glasgow  
Robert Graham, Kirkintilloch  
James Muir Hall, Lanark  
George Hicks, Rothesay  
Helen Robb, Glasgow  
James Paton Young, Airdrie  
Alexander Young, Glasgow

100 Students from this School have passed the Minor and Major Examinations during the past three sessions.

The Short Autumn Session commences August 13th, 1900.  
The Winter Session commences October 1st, 1900.

NEW PROSPECTUS ON APPLICATION.

**JOHN LOTHIAN, Principal.**

## Sheffield College of Pharmacy,

PRINCESS BUILDINGS, 118 THE MOOR, SHEFFIELD.

Principal - J. W. J. TURNER, Ph.C.

### List of Classes and Fees.

Monday, August 20.

Short Advanced Course for October Examination, Fee £5.

Monday, September 3.

Four Months' Course for January Exam., Fee £10 10s.

Monday, October 1.

Three Months' Course, £8 8s. Six Months', £12 12s.

Evening Classes on Wednesdays and Thursdays, 7-9 P.M.

*Particulars on application.*

## THE NORTH OF ENGLAND SCHOOL OF CHEMISTRY & PHARMACY,

55 Northumberland Street, NEWCASTLE-ON-TYNE.

Principal—Mr. F. R. DUDDERIDGE, F.C.S., Ph.C.

**JULY RESULTS.**—Mr. T. R. Ferry, Wallsend; Messrs. R. S. Briggs, J. W. Patterson and A. Stewardson, Newcastle. Three of these gentlemen passed at first attempt.

**Next Term commences Monday, 13th August.**

**EARLY APPLICATION SHOULD BE MADE FOR BENCHES.**

# LEEDS COLLEGE <sup>OF</sup> PHARMACY

**PRINCIPAL: F. PILKINGTON SARGEANT, F.C.S.,**  
**PHARMACEUTICAL CHEMIST.**

THIS College, fitted with all the most modern apparatus, offers exceptional facilities to Pharmaceutical Students. The tuition is personal, special attention being given to backward students, whilst the fees are very moderate and inclusive.

During the past Sessions Students have been successfully prepared for examinations connected with the Pharmaceutical Society, Cape Pharmacy Board, the Society of Apothecaries, and the London, Cambridge, and Victoria Universities.

Colonial Students may enter for a course of study in preparation for the "Minor," or for the examinations held in connection with the Pharmacy Boards of the respective Colonies. Particulars regarding Colonial examinations may be had on application.

Next Course commences August 20. The Fees for the Courses are :—

<b>FOR OCTOBER EXAMINATION</b> ... ..	<b>£4 4 0</b>
<b>„ JANUARY</b> ... ..	<b>£11 11 0</b>

Gentlemen who intend to live in Leeds whilst pursuing their studies, may obtain information regarding suitable apartments on application.

## WEST OF SCOTLAND COLLEGE OF PHARMACY, 157 ST. VINCENT STREET, GLASGOW.

Principals—THOS. S. BARRIE, Ph.C., Honours Chemistry, S.A. THOS. MABEN, Ph.C., F.C.S.

The College, after alterations, Re-opens on **August 6** with a purely tutorial course for the Minor Examination in October.

**FEES—£4 : 4 : 0 Day Classes ; £1 : 11 : 6 Evening Classes.**

The Winter Session will begin on October 6 with an Opening Lecture in the Christian Institute by Mr. THOS. S. BARRIE, followed by the distribution of the College Diplomas.

From entering College, Students are under the direct personal supervision of the Principals, who do their utmost to get them through their examinations, this being agreeably shown by the

### JULY EXAMINATION SUCCESSES—8 MINORS & 1 MAJOR.

**MINOR.**—Of thirteen Students, the following eight passed, **four at first attempt** :—

Miss J. KENNEDY, Hawick.	Mr. JAS. THOMSON, Fochabers.	Mr. W. A. RUSSELL, Glasgow.
Mr. T. E. GRAY, Brechin.	Mr. J. F. DRYNAN, Girvan.	Mr. JAS. RUSSELL, Paisley.
Mr. S. S. NICOL, Carnoustie.	Mr. A. TRENWITH, Bellshill.	

**MAJOR.**—Mr. PETER IRVINE, who passed at his first attempt.

PERCENTAGE OF PASSES.						APRIL.	JULY.
<b>WEST OF SCOTLAND COLLEGE</b> ... ..						<b>57%</b>	<b>64%</b>
REST OF SCOTLAND " " " " " "						26%	33%

A comparison of these figures shows that the high standard of success attained in April was more than sustained in July, and that the West of Scotland College stands in the front rank of Colleges and Schools Pharmaceutical.

Intending Students are invited to apply early for benches, as they are being rapidly taken up.

.....  
**Prospectus posted free on application.**



## PHARMACEUTICAL TEACHING.

### MR. CARSON

teaches and prepares for the Minor and Major Examinations at

10 Avonmore Gardens, Avonmore Road, West Kensington  
**FEE, 18/- to 40/- per Month.**

T. G. DAVY, M.A., M.R.C.S., M.D., Oxon., says:—"As a coach (I) consider would be difficult to find his equal."

**THE PRELIMINARY.** The teaching for this is done by  
**Mr. W. H. JACKSON, M.A.**  
**FEE, 18/- to 40/- per Month.**

## OWENS COLLEGE, MANCHESTER.

### PHARMACEUTICAL DEPARTMENT.

DEAN.—Professor ALFRED H. YOUNG, M.B., F.R.C.S.  
 PROFESSORS AND LECTURERS.—*Chemistry*—Professor Harold B. Dixon, A., F.R.S. *Organic Chemistry*—Professor W. H. Perkin, Ph.D., F.R.S. (Jany).—Professor F. E. Weiss, B.Sc.; Assistant Lecturer, O. V. Darbishire, A., Ph.D. *Physics*—Professor A. Schuster, Ph.D., F.R.S. *Materia Medica & Therapeutics*—Professor ; Lecturer in Pharmacognosy, William Kirkby. *Pharmacy and Pharmaceutical Chemistry* Assistant Lecturer, J. Grier.

The Prospectus of the Pharmaceutical Classes is now ready.

The curriculum for Students qualifying for the Minor and Major Examinations of the Pharmaceutical Society includes Chemistry, Botany, Pharmacognosy, Physics, Pharmacy, Pharmacy Law.

An Entrance Examination of the value of £10 will be offered to the competition of Students entering for the full course in October (subjects—Elementary Chemistry and Botany), and a prize of £5 is awarded on the results of the examination of the First Year's Course at the end of the Summer Session.

For all Particulars apply to SYDNEY CHAFFERS, Registrar.

## ANTI-KITO CREAM.

Antikito Cream is an absolute preventive of the bites of mosquitoes and all obnoxious insects, and renders the skin delightfully soft, velvety, and supple. It relieves the pain of sunburn, removes freckles, blotches, and other imperfections of the skin, and has deliciously refreshing and tonic qualities.

Antikito Cream is a triumph of scientific research; and is guaranteed to contain nothing of a poisonous or deleterious nature.

One of the most prominent medical men who has thoroughly tested "Antikito" under the most exacting conditions has been good enough to furnish us with the following expression of opinion:—

"Good."  
 Deven :  
 July 15, 1900.

I have found Antikito Cream wonderfully efficacious in keeping away midges, flies, mosquitoes, &c.

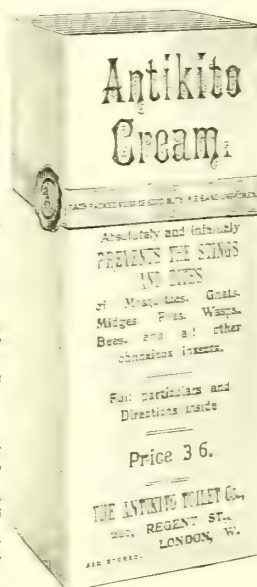
It will undoubtedly be welcomed as an unmixt blessing by everyone who is exposed to the attack.

It appears to be quite free from any irritant to the skin, and is a very pleasant application.

Signed, ———, M.B., M.R.C.S., Eng.

Prepared and Sold in Bottles, 3/6 each, by  
**THE ANTI-KITO TOILET COMPANY,**  
 200 REGENT STREET, LONDON, W.

Special Terms to the Trade on application.



## SPECIAL TECHNICAL WORKS.

**THE CHEMISTRY OF ESSENTIAL OILS & ARTIFICIAL PERFUMES.** By ERNEST J. PARRY, B.Sc. (Lond.), F.I.C., F.C.S. 400 pp., 150 pp., 14 Illustrations. Price 12/6, abroad 13/-. Illustrated. Price 12/6, abroad 13/-.

**COLE AND GLUE TESTING.** By SAMUEL RIDEAL, D.Sc. (Lond.). 150 pp., 14 Illustrations. Price 10/6, abroad 11/-.

**THE MANUFACTURE OF VARNISHES, OIL REFINING & BOILING.** Translated from the French of Litache, and extended by J. G. McILSTON. 400 pp., 27 Illustrations. Price 12/6, abroad 13/-.

**TESTING AND VALUATION OF RAW MATERIALS USED IN PAINT AND COLOUR MANUFACTURE.** By M. W. JONES, F.C.S. Price 5/-, abroad 5/6.

Published.—**PURE AIR, OZONE, AND WATER.** Their Uses in the Oil, Paint, and Soap Trades. Price 5/-, abroad 5/6.

All books strictly net, and post free.

Catalogue of Technical Books post free on application.

Polished by SCOTT, GREENWOOD & CO. ("Oil & Colourman's Journal" Offices), 19 Ludgate Hill, London, E.C.

## THE CHEMISTS' & DRUGGISTS'

### DIARY, 1901,

is now in preparation. Firms desiring space in this valuable advertising medium should make early application to

THE PUBLISHER,  
 4 CANNON STREET, LONDON, E.C.

## THE SPATULA LABEL BOOK.

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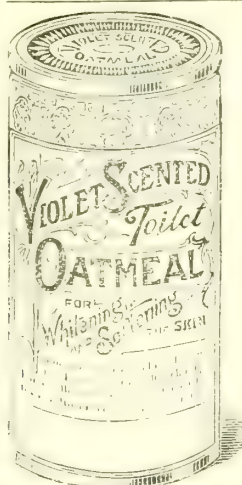
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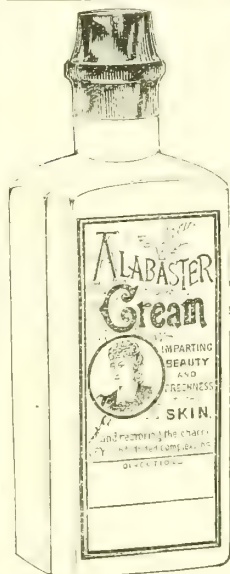
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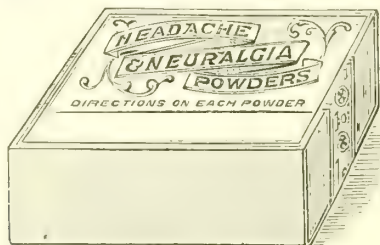
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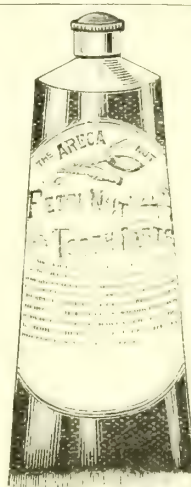
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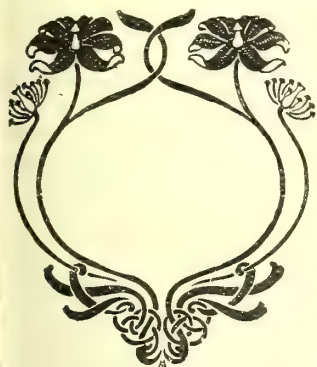
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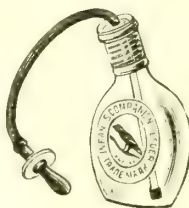
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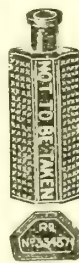
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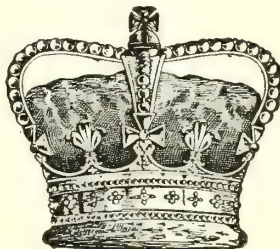
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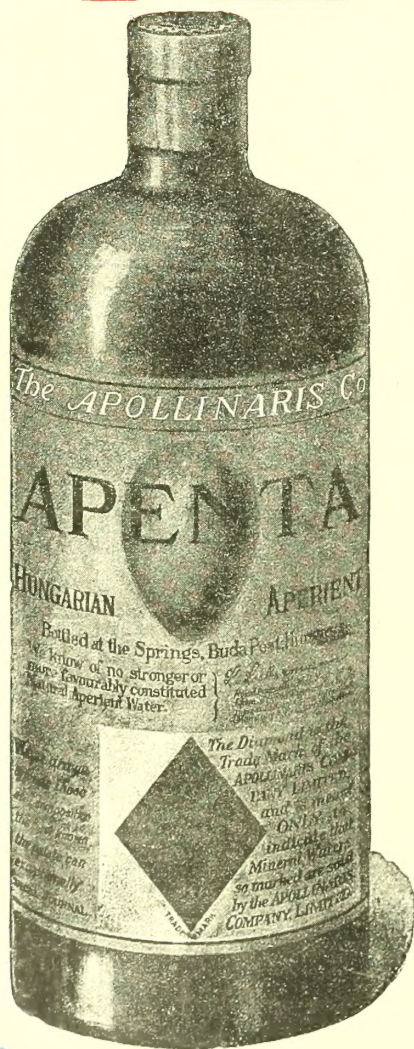
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